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NEW COMPUTER EXPRESS

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AARGH!

Now you can banish those word processor blues .....

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Easy DOS it

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What's in a name?

Atari's much publicised Folio Pocket PC is no more.

That is, the firm has been forced to change the name of its tiny technical breakthrough. When it hits the streets later this year the £200 machine will be called the *Atari Portfolio Pocket PC*.

All this because some mysterious person in the United States has already registered the Folio name. And even though it is not being used for any particular product it is still someone else's property.

Poor Atari already had this problem with the Abaq. That name was registered by a Dutch computer manufacturer. Atari's Transputer hastily became the ATW.

The explanation is simple enough. Atari doesn't want to draft in expensive and long winded lawyers to search through records around the world just to find a name which no-one else has used. So, the firm simply announces a name, sees if anyone objects, and acts accordingly.

Atari is confident that no punters are stupid enough to find all this confusing. Not surprisingly, Atari feels the name Portfolio is, after all, a better option.

• Folio... er... Portfolio PC

LOCOSCRIPT PC: IT'S A CERT...

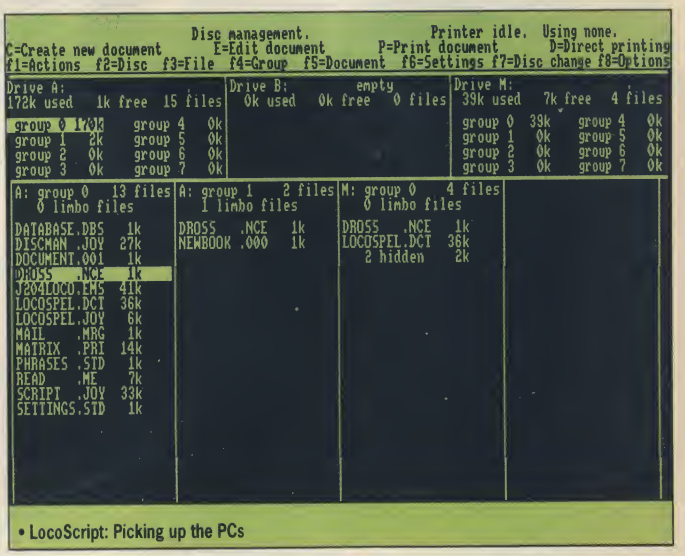
Million selling word processor for PC owners

The long awaited PC version of Locomotive's massively popular *LocoScript* word processing package is to be unveiled next September.

Programmers have been secretly working on the enormous project for the past 18 months. If all goes to plan the firm hopes to unveil a finished package in time for the PC Show in Earls Court on September 27th.

If so it will end years of speculation about the PCW package which is used by at least a million users in the UK alone. *LocoScript* was originally commissioned by Amstrad as the definitive letter writing program for its word processing computer, and was bundled with the machine.

However, the PCW's incredible popularity amongst the general public saw *LocoScript* emerge as a serious word processing tool and, arguably, Britain's best known computer program. With such a high profile it's hardly surprising that it has attracted many critics.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Drive B: 0k used 0k free 0 files empty
Drive M: 39k used 7k free 4 files
group 0 172k group 4 0k
group 1 2k group 5 0k
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SETTINGS.STD 1k
A: group 1 2 files 1 limbo files
DROSS .NCE 1k
NEWBOOK .000 1k
M: group 0 4 files 0 limbo files
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LOCOSPEL.DCT 36k
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• LocoScript: Picking up the PCs

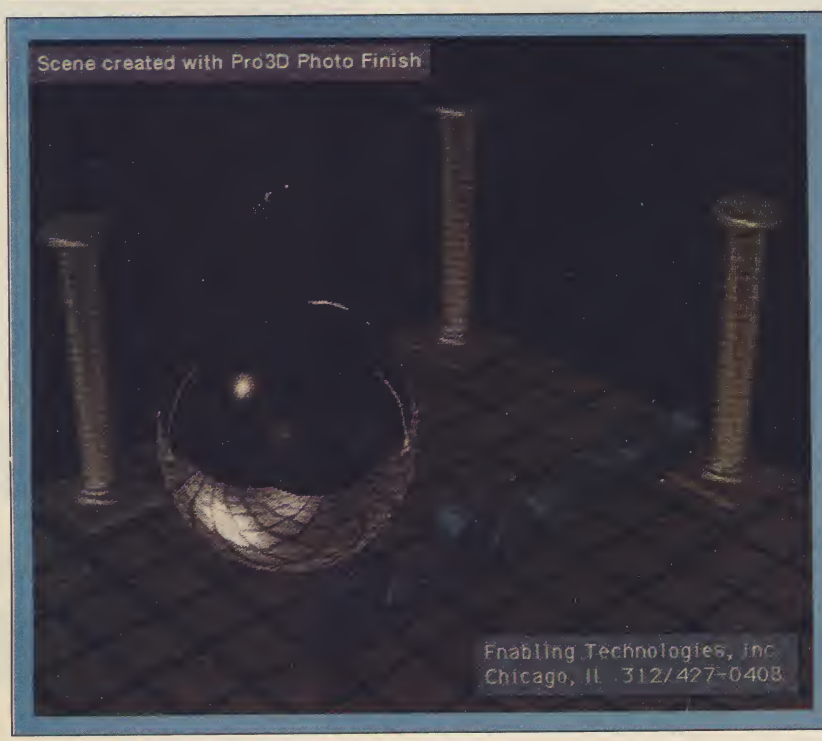
Locomotive's programmers have been given the Herculean task of speeding up the program, which has been criticised for being a trifle slow. *LocoScript 2*, the upgraded version, bundled with the PCW 9512, is faster and provides unrivalled printer support as well as an extremely wide range of characters such as Cyrillic, Greek and scientific symbols.

There are also add-ons such as a database program, mail merger and spell checker. Such features would be welcome on a PC version.

Over the past two years Locomotive has consistently refrained from talking about a PC version of the program. On that score there is no change. Technical director Richard Clayton would only offer: "We have no intention of commenting on this until we feel the time is ready." When asked if he could confirm or deny the existence of a PC version he could only repeat that statement.

Locomotive has not made a final decision on price, but the company is well known for pricing software as cheaply as possible. *LocoScript 2* for the PCW comes in at under £25, and a PC version would probably be in the £30-£50 range, pitting the powerful program firmly against the budget end of the market.

Locomotive would thus hope to appeal not just to PCW owners with a PC, but also to budget word processor buyers in general. Insiders suggest that the firm's main priority is finishing the program on time.



• These graphics appear to be pretty standard stuff until you realise they were generated on a PC.

The package responsible is a new thing from Mindscape called *Zing*. Just in from the States it costs £150 and features various 3D text fonts, perspective controls and facilities to display objects in solid 3D or as wire frame images.

Mindscape itself thinks the package will appeal to arty home users as well as serious DTP professionals looking to enhance their PC productions.

Micronet takes its tax beef to No 11

As promised by Micronet last month (Express 24) a petition has been presented to the Chancellor of the Exchequer complaining about the recently imposed bulletin board tax burden.

It was collected electronically and "signed" by some 3,000 Micronet members. Micronet top brass David Rosenbaum and Paul Needs marched up to Downing Street and presented Number Eleven with the document last week.

Micronet is complaining about the 15 per cent VAT tax on the grounds that it is a computer magazine, part of the press, and therefore zero rated.

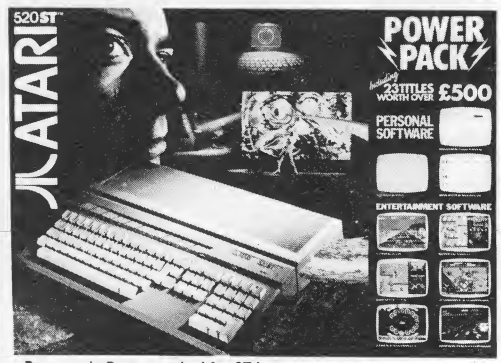
The Government had imposed the tax on electronic news and business services such as Reuters and the Press Association. Micronet feels it has been dragged into this category unfairly.

"There is no excuse for this. Either the Government is preparing the ground for a general imposition of VAT on the press or they have made a serious error," said Rosenbaum. "We don't believe there should be a tax on information and there shouldn't be different rules for electronic media."

Micronet's annual tariff remains at its pre-VAT charge of £80 until the end of next month. Details of those changes will be in Express.

• Making a point: Rosenbaum and Needs hit Downing Street

ATARI: POWERPACK TO THE PEOPLE



• Powerpack: Best ever deal for ST buyers

Atari's biggest ever value pack for the ST will hit the streets this week, priced at £399.

As first predicted in *Express* (March 11) Atari has bundled its 16-bit micro with a choice selection of programs including top notch games such as *Out Run*, *R-Type* and *Afterburner*. Atari has thrown in another 17 games all of which are highly regarded. Also included will be *First Basic Organiser* and *First Music* pack.

The bundle carries a nominal value of more than £550. This offer replaces that which Atari has stuck by for more than a year now and will last until next February.

Prospective ST buyers, and there are many of them, are left with a clear choice. They and buy the basic ST with no frills for £299 or they can splash out the extra £100 for Atari's box of goodies. In the past the majority of ST buyers have plumped for the latter.

All major hardware manufacturers are now offering attractive bundles for sub £500 16-bit machines. Commodore's Amiga is being offered with a few pieces of aesthetic software as well as 500 free airmiles.

And that most persistent marketeer Amstrad has chucked a printer, business program and four games with its PC1512 for a price of £499.

Some will wonder why these manufacturers don't simply drop the prices of their machines. But the extras thrown in, whilst worth a good deal to buyers, don't cost large corporations much individually. Such are the numbers involved that a £20 game could be sold to a hardware manufacturer for pennies.

Watch out for Watchmen

According to Ocean it's destined to be next year's *Robocop*.

The firm which has dominated the charts so far this year is already planning another assault for 1990 in the form of *Watchmen*. The licence covers the cult comic of the same name from DC Comics and a forthcoming movie directed by Terry Gilliam.

The movie, and the game, are in the first stage of production. Ocean is enjoying some success with violent tie-ups. It's now working on the horror film *Nightbreed* as well as *Batman the Movie*.

For suckers everywhere..

Inventors will do almost anything to incorporate technology into any and every aspect of your lives.

The latest in high tech tik tackery is none other than a talking vacuum cleaner. Hoover's Sensotronic Audio System 300 is stuffed with chips on a microprocessor which can be triggered off by sensors inside the cleaner.

The vacuum cleaner, when necessary, will start blabbering on about bags being full or tubes being blocked. Someone has spent three years developing this.

Doing the business

A cheap software package for would-be entrepreneurs has been devised which promises to put aspiring business stars in the picture.

BISON (Business Information On Disk) features a range of business orientated games and quizzes as well as tips and advice to help the uninitiated through the fraught world of business. The most useful feature is an extensive database of important bureaux, books and so on.

The database can be updated by the user to accommodate local info or by the software house to update national details. Produced by Project North East the venture has been backed by oil giant Esso. Both hope it will help unemployed people get started.

The firm claims that the £300 asking price is very fair even for those on a low income. "That's why we had to lower the price," said the firm's Geoff Evelyn. "A package like this would normally cost around £2,000.'

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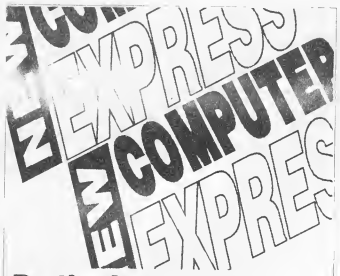

Do the Locomotion

LocoScript, the word processor that comes bundled with the PCW, is to be available this year on the PC. The only people this won't surprise are PCW owners.

Locomotive's original brief from Amstrad was to put together a letter writing program. This produced an unremarkable but watertight word processor, slow but sure, good for writing letters and business documents, barely average for 'serious' writing. Things would have ended there and both program and company would have slipped into obscurity had it not been for several factors.

First, the PCW sold over million, spreading the *LocoScript* name far wider than anyone had expected. Second, Locomotive listened to their customers: it rewrote *LocoScript* and added things in response to their demands – unrivalled third party printer support, Greek and Cyrillic (and Welsh and Urdu and Arabic), DIY characters, extra fonts, an add-on database... The plug-in-and-go word processor has become a complete system.

Given the captive market, Locomotive could have priced their products more or less as it liked. But they're all twenty quid or so, and all well-supported, well-written and well thought of. Locomotive has proved that it's possible to write serious and well-supported software at a reasonable price and stay in business.

The question is, will their enlightened approach port to the PC version? Of course a *LocoScript* PC would appeal to the PCW owner with a PC, but that would be no firm basis to launch. A £35 word processor on the PC of the calibre of *LocoScript*, for all its shortcomings, would give the budget PC word processor buyer a genuine alternative to the current market. And it might even shock some of the 'standard' £300 word processing programs out of their complacency too.

EDITOR.....Rob Ainsley
NEWS EDITOR.....Colin Campbell
FEATURES EDITOR.....Andy Storer
REVIEWS EDITOR.....Rik Haynes
TECHNICAL EDITOR.....Jerry Glenwright
ART EDITOR.....Angela Neal
ART ASSISTANT.....Harriet Athay
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ADVERTISEMENT MANAGER....Mark Salmon
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AD EXECUTIVES..Sarah King, Julie Hodgkins
AD TYPESETTING.....Terry Turner
PUBLISHER.....Greg Ingham
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Young at art

An exhibition showing off computer artwork is to be held next week in Cambridge.

It ties in with a conference at the Homerton College on "Art Education and the Computer" which begins on the 20th. Pictures from schools and colleges from all over the country will be on display including those by older students using the Archimedes.

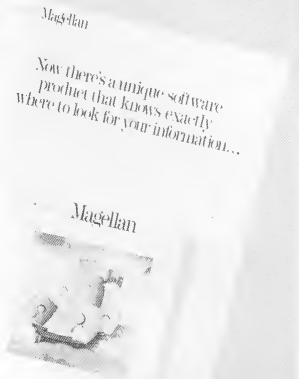
The artwork exhibition itself runs from May 15th – 26th. More from Michael Cooper, the IT Unit, Homerton College, Cambridge, CB2 2PH.

Magellan straight to the point

If you want to find something elusive, send *Magellan* in to do the job.

That's the message from Lotus this week as it launches its new hard disk searcher for the PC. Costing £95 *Magellan* will zip through your hard disk weeding out relevant information using specific phrases or instructions.

It can also gather portions of different files and stick them all onto one. Lotus is planning to put the price up to £140 come the end of September.



• Exploring: Magellan to set sail

DEFINITIVE COUPE LINE UP UNVEILED

By Technical Editor Jerry Glenwright

After months, nay years, of speculation, rumour, leaks and misguided guesswork, Miles Gordon Technology has finally released a definitive, no-nonsense and reliable technical specification for its SAM Coupe due to be launched this September.

The £220 machine has attracted enormous interest mainly due to its hybrid nature of four different modes including Spectrum compatibility. So many have tried to squeeze so much information out of MGT that the firm feels confusion may have set in. Indeed, it has taken a back seat over the past few months, preferring to let things cool down.

• Tout d'un Coupe: SAM spec revealed

Here then is your guide to the SAM Coupe:

ENGINE: Z80B microprocessor running at 6 Mhz.

ROM: 32K containing BASIC, disk bootstrap, BIOS.

RAM: 256K upgradable to 512K on board.

SOUND: Philips SAA 1099 synthesizer, 6 channels, 8 octaves, stereo with wave form, amplitude and envelope control.

GRAPHICS: **Mode 1:** 32 x 24 character cells per screen, each one capable of two colours, 16 colours selectable from 64. Speccy compatible.

Mode 2: As Mode 1 but with 32 x 192 cells.

Mode 3: 80-column text display. 512 x 192 pixel screen, each one selectable for colour. Four colours selectable from 64.

Mode 4: 256 x 12 pixel graphics screen, again, all selectable for colour.

INTERFACES: UHF, colour composite video, digital and linear RGB, Atari standard joystick port, mouse, lightpen, Sinclair compatible cassette, MIDI in, MIDI out, network, RS 232 and parallel printer via Smart cable.

DISK DRIVES: One or two removable and internally mounted slim Citizen drives. 780K formatted.

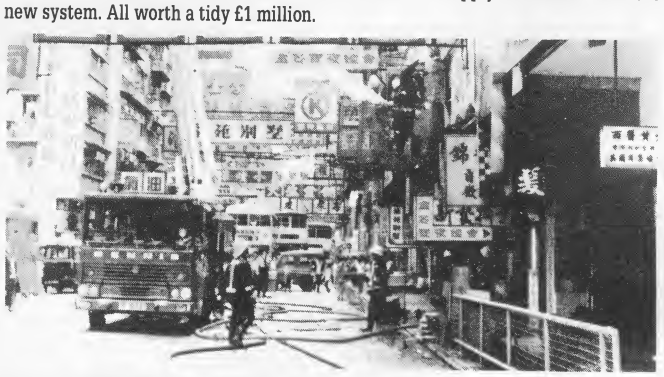
A new PC every fourteen seconds

Completely enormous Taiwanese computer maker Mitac is extending its manufacturing plant. It has stuck another thirty thousand odd square metres of floor space onto the end of its far Eastern factory. And the result? By the end of 1990 the factory will be producing one PC every 14 seconds.

Well no, at first sight it doesn't look like a picture which need be in these pages. But there is a plausible explanation.

Authorities in Hong Kong have just spent a good deal of dollars on computerising their fire system. The firemen need all the help they can get whizzing around Hong Kong's labyrinth of streets. And if they fail these houses have a tendency of burning very quickly.

And so CGS, a UK firm, has just won the contract to supply the software for the new system. All worth a tidy £1 million.



ST/Amiga Format to split

***ST/Amiga Format*, said to be the UK's biggest selling 16-bit magazine, is to split amoeba-like into two publications.**

As of August, ST and Amiga owners will be offered their own separate mags. Not surprisingly, they will be entitled *ST Format* and *Amiga Format*.

Currently, the mag features a double sided disk on the front cover offering programs for both machines. The two new mags will both have their own disk with cover price remaining at £2.95.

Format is a sister paper of *Express* within Future Publishing. The news follows the sale last week of *ACE* magazine to EMAP for an undisclosed sum. A number of writers from that magazine will work on *Amiga Format* whilst many original *Format* scribes will begin on *ST Format*.

"These will both be really ace magazines. We've been able to double our commitment to the 16-bit market because of the astonishing growth of *ST/Amiga Format* over the past few months," commented publisher Greg Ingham. "I think it's really linked to a mushrooming of Amiga owners and the continuing success of the ST. Both user bases are clearly able to support their own magazines."

Amstrad goes spare

That part of the great Amstrad structure which deals with all your problems and gets out the spare parts has moved.

The whole department will now be under one roof at: Fleet House, River Way, Harlow, Essex. Customer services number is now 0279 454555.

CRL goes busting

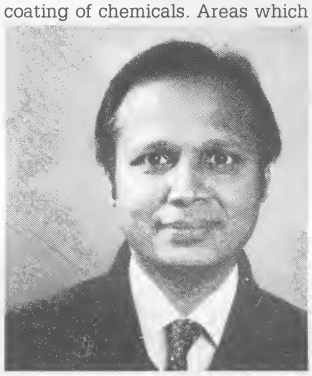
Following its successful virus busting program on the Amiga, CRL is launching an ST version later this month – which is just as well because there are reportedly 20 different viruses on the ST already. Virus Killer costs £10. Further details from 01 533 2918.

Eureka: Cheap and efficient chips

A British scientist has made a discovery which could speed up the production of microchips and, ultimately, make computer production a relatively inexpensive business.

Sunil Talim of the National Physical Laboratory reckons future chips could be made by shooting tiny components through a laser gun onto a wafer rather than laboriously building them on top of one another.

Quite by accident he found that camera lenses have an uneven coating of chemicals. Areas which attract the most have a small electrical charge. Using this knowledge Talim believes complex but cheap chips can be manufactured.



• Talim: Tucking in to chips

Layers on a chip could be built using an electron gun with charged areas attracting the tiny components.

"Of course it's all quite a long way off but yes, chip production will be cheaper and more efficient in the future," Talim told *Express*. "It all depends on the amount of backing I get from industry." He is currently negotiating with universities for further backing in his research.

Apple is giving Macs away!

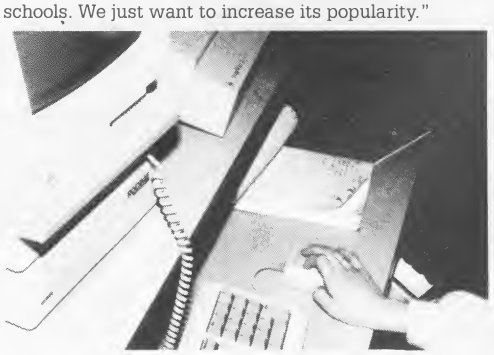
Kids in Scotland and Northern Ireland are to be given the opportunity to learn on Apple Macintosh machines as a result of a new push by the famous American manufacturer.

Apple is giving away £500,000 to Scottish schools and a further £250,000 to Northern Ireland in an effort to wean the younger generation over to the Mac. This is the first such exercise anywhere in the world.

If successful Apple plans to give English schools some machines. The kit comes in the form of hardware, software and learning centres. Whilst the Macs won't actually be installed in the classroom they will be easily accessible for thousands upon thousands of pupils and teachers.

Apple maintains that the Mac's simplicity makes it the ideal machine to learn on for kids as well as adults. The firm claims that more Mac's are used in schools around the world than any other computer.

Although the machine is a tad expensive for this country it is enormously popular in the States. But Apple reckons this is stopping no-one over here. "Educational authorities this side of the Atlantic are buying the machine already," offered a spokesperson. "Only recently Fife installed one in every one of its schools. We just want to increase its popularity."



• Bunch of apples: Hands on experience for youngsters

TOP 20 *Full Price* GAMES

1	**Robocop** OCEAN	*Spectrum, C64, CPC, ST, Amiga, MSX*
2	**Populous** ELECTRONIC ARTS	*ST, Amiga*
3	**Run the Gauntlet** OCEAN	*Spectrum, C64, CPC, ST, Amiga*
4	**Dragon Ninja** OCEAN	*Spectrum, C64, CPC*
5	**Operation Wolf** OCEAN	*Spectrum, C64, CPC, ST, Amiga*
6	**In Crowd** OCEAN	*Spec, C64, CPC*
7	**Football Manager 2** ADDICTIVE	*Spectrum, C64, CPC, ST, Amiga, PC*
8	**Emlyn Hughes** AUDIOGENIC	*Spectrum, C64*
9	**Middle Earth** MELBOURNE HOUSE	*Spec, C64, CPC, ST, Amiga, PC*
10	**Renegade 3** IMAGINE	*Spectrum, C64, CPC*
11	**Pacland** GRANDSLAM	*Spectrum, C64, CPC, ST, Amiga, MSX*
12	**Microprose Soccer** MICROPROSE	*Spectrum, C64*
13	**Afterburner** ACTIVISION	*Spectrum, C64, CPC, ST, Amiga*
14	**WEC Le Mans** IMAGINE	*Spectrum, C64, CPC, ST, Amiga*
15	**Arcade Muscle** US GOLD	*Spectrum, C64, CPC*
16	**Barbarian 2** PALACE	*Spectrum, C64, CPC, ST*
17	**R-Type** ELECTRIC DREAMS	*Spectrum, C64, CPC, ST, Amiga*
18	**Double Dragon** MELBOURNE HOUSE	*Spectrum, C64, ST, Amiga, PC*
19	**Giants** US GOLD	*Spectrum, C64, CPC*
20	**Football Man. 2 Exp** ADDICTIVE	*Spectrum, C64, CPC, ST, Amiga, PC*

TOP TEN *Budget* GAMES

1	**720** KIXX	*Spec, C64, CPC*
2	**Turbo Esprit** ENCORE	*Spec, C64, CPC*
3	**Treasure Island** CODE MASTERS	*Spec, C64, CPC*
4	**Spy Hunter** KIXX	*Spectrum, C64, CPC*
5	**Fast Food** CODE MASTERS	*Spectrum, CPC*
6	**Shanghai Warriors** PLAYERS	*Spec, C64, CPC*
7	**Gun Boat** ALTERNATIVE	*Spectrum, C64, CPC*
8	**SAS Combat** CODE MASTERS	*Spectrum, C64, CPC*
9	**Twin Turbo V8** CODE MASTERS	*Spec, CPC*
10	**Hardball** KIXX	*Spectrum, C64, CPC, Atari 8-bit*

RE re-entry • NE new entry • Last week's positions

Compiled by Gallup

The charts shown are based on the Open Market, that is retailers who stock a broad range of products. All charts shown are copyright of Gallup.

Electro Erotica

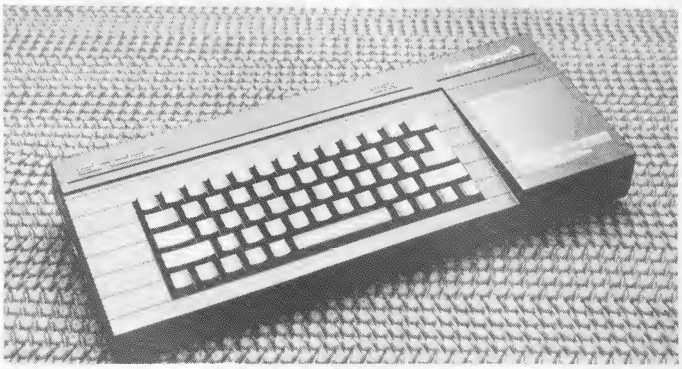
Following investigations by *The Sunday Times*, the Government is about to introduce new laws in a bid to curb computer pornography currently rife amongst users of bulletin board services around the country.

The Sunday Times found that children as young as eleven were able to receive on their home terminals close-up colour pictures of couples performing a variety of sexual acts.

The pictures have a level of graphic detail not available on any other medium in the UK. Although the pictures are protected by a series of passwords, the newspaper was able to show how young children could easily decipher the codes thereby allowing them to display the pornographic pictures on home computer screens.

The Home Secretary, Douglas Hurd, is expected to agree to an amendment to the broadcasting bill in an attempt to outlaw this form of pornography.

SPECTRUM PRESS FOR ACTION



Just as the computer industry starts to settle down to its Summer lull, Amstrad has announced an unexpected new bundle for the Spectrum +2 and +3.

For £149 and £199 respectively, you'll get the computer, light gun, joystick and six games: a lightgun compatible version of Ocean's chart-topping *Operation Wolf*, the ever popular TV licensed *Bullseye* from Domark, and four Mastertronic games.

Amstrad is shipping The Action Pack to retailers at the beginning of June, and will back the pack up with a massive TV and media advertising campaign later in the year. Amstrad is hoping the pack will establish itself before the peak pre-Christmas sales period by launching it so early in the year. Amstrad's Group Sales and Marketing Director, Malcolm Miller commented, "Sinclair already enjoys almost 50% of the home computer market. We believe the Action Packs will bring record sales".

The standalone versions of Spectrum +2 and +3 will be superseded by the Action Packs. There are currently no plans for a new CPC bundle.

Show 'em what you can do

• ST: Have a go yourself

Innovative ST owners could be heading for a holiday in the sun if their ideas are good enough to impress editors of computer mags.

The Atari Computer Show in June will be the venue for a competition to decide the best use of the ST. Winners can expect to be whisked off to more exotic places than Alexandra Palace – the show's venue. First prize will be a cruise for two in the Mediterranean worth a hefty £3,000.

The runner up is promised a seven day vacation in one of 30 locations in Europe or the USA. And the third prize winner will receive two weeks in sunny Florida.

To enter, just write a 500-word summary outlining the most innovative way you use your ST and send it to *Express* along with a disk containing any support material.

We will choose the most outstanding entry, which will go forward to the finals on June 23rd which will be judged by various editors.

Give us a clue

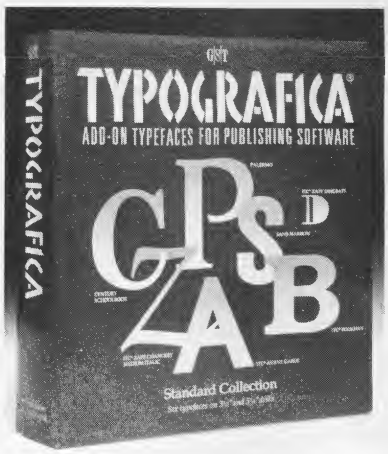
Perplexed owners of Electronic Arts games: *Neuromancer*, *Starr* and *688 Attack Sub*, may find solace from three new cluebooks designed to help gamesters through any patches gameplaying difficulty. Costing £5 each, the cluebooks are available from Electronic Arts' Customer Services on 0753 46465.

Facing up to facts

PC-owning DTP lovers are to be offered range of nine new typefaces courtesy of GST.

The range will be offered under the Typografica name with each one costing £29. All the typefaces can be fiddled around with to create a number of fonts at different type sizes. They're all compatible with major DTP systems such as *PageMaker*, *Ventura* and *Timeworks Publisher*.

"There's an enormous demand for easy to use fonts and it's not being addressed by current products," claimed a spokesman. "This represents a breakthrough which will appeal to small businesses, professionals and cost conscience corporates."



• Typografica: Catering for all types

Well wicked

If you fancy the idea of a game "that defies description" then *Wicked* from Electric Dreams could be worth a look. Out next month on Amiga and ST, with a C64 version following shortly after, *Wicked* is a Binary Vision game, whose previous titles include *Zoids*, *The Fourth Protocol* and *Stiflip & Co* conversions.

Horsing around

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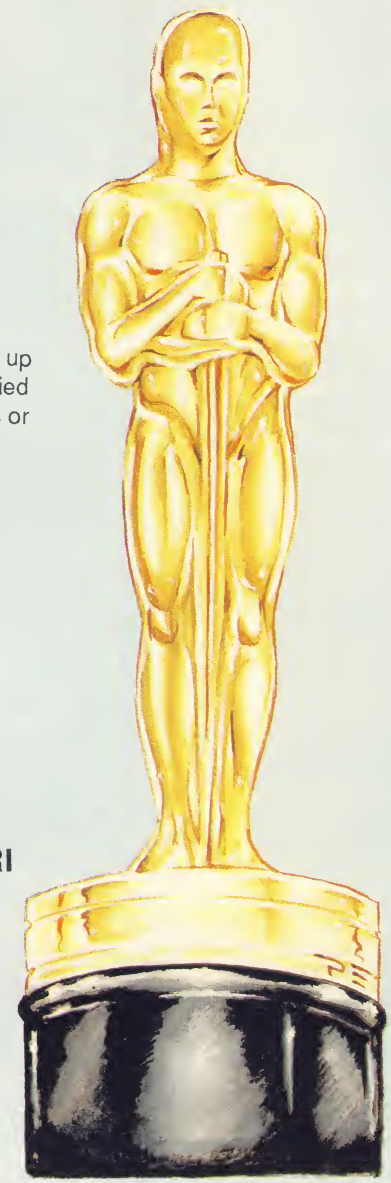

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More pages packed with another selection from our postbag and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to:

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PS. Sorry, we just don't have the time to give personal replies, whether you include an SAE or not. We're too busy putting Express together!

BITE THE BULLETIN

An error crept in to my recent classified ad. You have published my home voice phone number rather than the bulletin board data line number (01) 952 5128. This could lead to the scenario of me being woken up at strange hours of the night with the phone ringing (as the voice phone is in my bedroom). At least I can tell people the proper number when they phone me!

Nigel Hardy (SysOp. Arkham Opus)

● *Whoops, sorry! But pity the poor callers too, phoning at 3 am, expecting to hear a torrent of high-pitched screaming and foaming noises from the bulletin board, and hearing it from you instead.*

ELECTRON UNDER THE MICROSCOPE

My dad has promised to buy me a new computer to replace my Electron. We would like a machine that would allow me to play games (arcade conversions etc.) write programs, and help with my schoolwork (we have BBC equipment at school.) My mother is at college, and requires to use it as a word processor. Dad has a PC computer at work and would like to have the ability to bring work home (He uses *Lotus 1-2-3*).

We have spent quite some time trying to reach a decision on which is the right machine, and have slowly become more confused. Can you recommend or offer some suggestions on a machine that would cover this requirement. Dad has indicated he is willing to spend up to £1,200 on a suitable system.

My granddad buys me your magazine every week, and I reckon it's the best magazine in the history of computing.

C D Croft, Fareham, Hampshire

● *Sounds like our old friend the Atari ST (word processing no problem – see this week's feature on word processing). Loads of arcade games to choose from, plenty of programming packages, and educational things galore (check the magazine* ST Format *for details). Costs as little as £260 though bundles are available with lots of extra games – check the mail order ads in these pages. You can plug the 520STFM into a TV for games but you'll need a monitor for word processing – the Atari SM124 mono one (£120 or so) is fine. And your Dad can get a PC emulator for the ST, and even use 3.5" disks formatted on a PC directly on the ST. Lotus 1-2-3 isn't available for the ST, but* VIP Professional *uses the same data files and accessories and to all intents and purposes is interchangeable with* Lotus 1-2-3.

CONSOLE MIO

I am considering buying a games console to use alongside my Spectrum +3. I have worked through all that are or will be available and have finally come to the choice of either a Sega Megadrive or a PC Engine. The thing is I don't really know which one would be best for playing general coin-op conversions, eg *R-Type, Altered Beast* etc. Could you please help me!

Michael Kirk, Stevenage, Herts

● *We reckon the Sega has more potential, but there are no more than a handful of machines in the UK at the moment and neither will be officially available until the autumn.*

VIRUSES, PT 387

According to all that I've read, the only threat from computer viruses is from bulletin boards and pirate software, which may be contaminated.

This is not the case. A friend of mine and I, both with Amigas, do not use either bulletin boards or disks from dubious sources, yet we have noticed viruses on two occasions, both from commercial software. In both cases we were able to identify the originating disks by recalling which disks had recently been accessed and by examining which were write protected. In one case the culprit had been bought from a shop; in the second it was from a mail order firm.

Fortunately, on both occasions the virus was noticed before it triggered. The first one we caught when it overwrote the boot block of a commercial program which then failed to load. On the second occasion we were prepared with a memory-resident virus killer, which spotted the infected disk instantly.

Perhaps the problem is caused by bored shops taking disks out of their packaging and giving them a try out, perhaps on infected equipment.

The moral is, you're not safe unless you check every new disk, no matter what the source. It's a sorry state of affairs we've come to, but it seems that a good virus killer is now an essential acquisition. Perhaps one should be bundled with every new computer? Also, it would help if commercial software houses included virus protectors in the boot blocks of all disks they publish.

Roger Musson, Edinburgh, Scotland

● *Hmm. I'm not convinced, nor, I bet, are the software houses. First, a boot block residential virus killer would be an ideal place for a hacker to hide a virus; second, the software houses will point out that commercially bought software from reliable places need no virus protection as, of course, they're never ever going to be copied by anyone, are they?*

Any disks with viruses bought from reliable sources should be reported to the publishers and they can investigate further. (Better still, report it to our News Editor!)

To put a virus killer on each disk would make it look as though all disks were susceptible to viruses. It would be like the baby food manufacturers supplying metal detectors with each jar of baby food.

EXPRESS – RUNNING LATE

The distribution network that gets that great *New Computer Express* into our shops is not working to any form of regular pattern.

Express is nearly always late and although we have our meetings on Friday evenings. We have been going without our favourite super mag as getting it the day after is just not good enough.

If you can cure our problem with a free subscription we won't have a problem!

Kenneth Hardacre, Secretary, Bridlington Micro Computer Club

● *There are tens of thousands of retail outlets across the country and some foul-ups are bound to occur. That said, it's still annoying for us as well as you when we find the magazine we spend these lovely summer days putting together isn't getting to the people who want to read it!*

We're working on Bridlington and if you have any problems getting Express in the shops, let us know and we'll do our best to sort it out.

READERS, WRITE!

Excuse me for butting in but whilst I covet your publications and read with delight the quick witted banter in the correspondence between your readers and yourself (often baffled and amazed by the technical and literary talents you all exhibit) I was forced to awake from my slumbers by your reply to Mr Parker's letter in *Express* 29, suggesting that readers supply reviews.

Contrary to your opinion I think it would be a wholly worthwhile exercise if you followed Mr C Parker's idea. Look at the quality of the letters, ideas and reasonable requests we read from the majority of our brethren in your magazine. Isn't it a little presumptuous to dismiss your readers' ability to inform ➤ and write 'quality' items (you do of

GAMES: FAR TOO CHEAP

To the person who calls himself Jumping Jack Flash. You say that you only pirate or should I say steal the stuff that you could not afford. All I can say is, how did you get your computer? The chances are you saved up for it so that's exactly what you should do for the software.

You also use the excuse that the programmers get paid too much which is utter rubbish. The majority of programmers get nothing like what he

MYSTERY PRIZE WINNER

states; so what if the few exceptions do make £50,000 a year? They deserve it for the amount of time that goes into programming a game.

I would happily pay £20 or even £25 for a game or pay £100 for a good Graphics or Word Processing program because if you get months or even years out of it, it's cheap entertainment. I personally think that any person who pirates software could only justify their actions if somebody put a gun to their head and told them to do it, other than that there's no excuse.

Oh yes, I must congratulate HiSoft for the help they gave me with *Devpac 2* (you see you couldn't get that with pirating). PS Your mag is the best value that money can buy.

PPS Can you drop your price 10p (Only kidding).

J Thornton, Blackpool, Lancs

● *Nice to hear someone voicing the other side of the argument for a change! Let's hope next week's article on where the money goes that you pay for your programs can clear up a few areas of doubt (such as how much profit a software house actually makes per disk). Anyway, as the letter of the week, you have some software coming absolutely free (and we are safe in the knowledge that you won't pirate it).*

course have editorial control at the end of the day)? Do you think they can't articulate themselves coherently enough?

As your magazine is implicitly, if not explicitly, a consumer orientated publication that offers information, advice and often humour surely we would all benefit from more reader input? Why discourage those things which you try to encourage?

Give Mr Parker's idea a try, perhaps you will be pleasantly surprised.
A Davis, Reading, Berks

● ***Well, I'm not convinced. The standard of a lot of 'professional' technical writing and games reviewing is embarrassing, and it would be unreasonable to expect a better level from amateurs. Anyone is welcome to send in freelance contributions anyway; we get quite a few, but about 1% of them get published, because we simply can't afford to pay for stuff that we could have written ourselves. If you want to make an unpaid point, there's always the letters page.***

It sounds like an extension of the scheme to allow 'licensed' teachers into our schools. I've always fancied being a surgeon myself. Any hospitals out there fancy letting me into the operating theatre for an afternoon? After that I think I'd like to have a go at flying a passenger airliner...

ON SPEC

Whilst wandering round my local newsagents I happened upon your periodical slyly peeking out at me from the middle shelf. Summoning up the courage I hurriedly slipped it into a copy of the *Sunday Sport*, so that nobody could see that a 34 year old is indulging in such perverted practices as reading computer mags, and hurried home for a read. My conclusion was that it was a nice little mag and I would speak to the male assistant and have it delivered.

Enough of this flannel, a point or two. First, I was not impressed with the space devoted to the Speccy. Surely if you are that short of material then you should seek it from outside? I for one would be more than willing to do some articles/reviews for you. Second, well done Mr Ibbotson, (Starting a club – Express 24). You have now done the hardest part, deciding to go for it. Next, run yourself off an outline of how you see the Guild operating, and advertise your existence. Don't be afraid to approach all the magazine for help/advertising, after all, the worst they can do is ignore you, and ignore you. Most important, keep regular contact with your members. An uncontacted member is a dissatisfied member. Try a regular newsletter on paper, disk, or tape. To cover your expenses, ask your members to send a disk and SAE for the newsletter etc. If you are not out for a profit, make if free membership etc.

How do I know so much? I am the assistant editor of SUUG, the Spectrum unemployed group you mentioned, and yes, we are very successful. If you or any unemployed Speccy users want more info, feel free to drop me a line:
Dave Burns, SUUG, 218 Belgrave Walk, Phipps Bridge, Mitcham, Surrey CR4 3QE

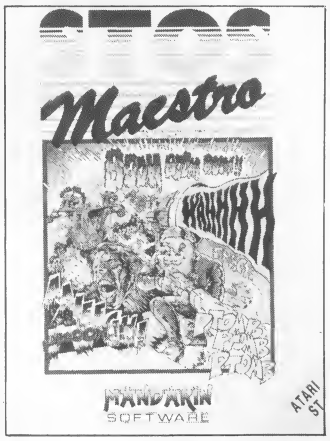
Many thanks for allowing me onto your pages.
Dave Burns, Mitcham, Surrey

● ***Thanks for your advice – I'm sure it'll be gratefully received. (We'll be in touch about the Spectrum stuff).***

STOS UP

Thank you for printing the article on our new range of add-ons to *STOS*, the game creator for the Atari ST. However I must take issue with some of Rik Haynes' comments on the packages.

Rik feels that the *STOS Maestro Plus* sampling package is expensive at £69.95, but surely this is a fairly typical price if anyone was to look at the retail prices of other competing sampling packages on the ST and Amiga. For the record we sell the product to distributors for £35.28, out of which we must pay for eight months' software development, pcb design, components, cartridge case, assembly, the writing of



• Unfair sample? Controversy about our STOS review!

a decent manual, packaging, advertising, administration, user support and our salaries! And nobody at Mandarin expects the sales to be anywhere near those achieved by games. Software Horizons may well have released a sampler package for £35, but I doubt very much that it will be available in the shops; then they'll have to sell it for anything up to 55% discount after VAT has been removed.

To date we've sold more than 20,000 copies of *STOS* in the UK alone, with the Amiga version well under way for a September launch. We developed *STOS compiler*, *STOS Maestro* and *STOS sprites 600* as a direct result of users writing to us requesting these products – we're not just cashing in as Rik claims. *STOS* users want sampled sounds in their games just like those found in commercial games. They also want the games to run faster which is why we spent six months producing the compiler. If we hadn't released those products we would have been much more guilty of failing to support STOS, which has proved so popular with ST owners.
Chris Payne, Mandarin Software, Macclesfield

● ***Rik replies: Software Horizon told us that Mastersound will be available in the shops later this month for £35. I think customers are more interested in the price and performance of a finished product – not how long and how much it cost to produce. I'm still not impressed by STOS Maestro's lack of facilities when compared to other sound sampling products of a similar price.***
Robin Day continues: Well, yes, thank you, and now can we move on to the next question, no, not you, not the fat bald gentleman with the cheap suit, the one next to him – yes you sir...

TAKING THE RIP

You've done a feature on how *The Guardian* uses computers to produce its pages how about one on how you do it? After all, this is a micro mag, not a mainframe mag, and so would be far more applicable.

Why are your classifieds such a ripoff? When you announced your plans for them I thought, 'Oh good!' But when I saw the price tag £5 for 20 words – well, my response is unprintable!! Surely it is not necessary to have them priced so high? A couple of quid for 20 words at £5 for 30-40 maybe, but as it stands it's not worth it.

And what happened to the preview and back issue pages?
Simon Daniels, Long Buckby, Northants

● ***We'd love to do a feature on ourselves though it seems a bit of an ego trip, so we'll leave it for now.***

Classifieds, a rip off? At £5 I'm afraid we just break even – each page costs us money to produce you know! And for £5 you get almost instant exposure to tens of thousands of readers up and down the country – no waiting around for up to three months as you do with monthlies. £5 is far too cheap, it should be at least £10 a word!

The back issue pages are dropped whenever we can squeeze in more editorial pages (which, we think, are a bit more interesting!). Besides, many of our back numbers are now sold out, so it seems a bit unnecessary to have it every week.

ATARI 8 BITCH

I'd like to know why there is no Atari 8-bit column in the machine specific columns (your format) and don't try to give me any garbage about the Atari 8-bit being dead! They are alive and kicking and here's my proof.

In the back of *Computer Trade Weekly* is a weekly chart of software sales on various machines. The Atari 8-bit was at the bottom all of last year until finally Atari 8-bit sales began to go up, and on January 21st of this year, the Atari 8-bit sales rocketed to 4.4% whilst Amiga was below at 3.9% and ST still ahead at 5%.

But then a week after this, the sales of Atari 8-bit software went even higher to 4.9% whilst Amiga and ST were down to

2.3%.Atari 8-bit is clearly showing something of a revival.

So where's our column then?
Peter White, Battersea, London

● ***We still think there aren't enough readers out there – only a few dozen or so, which would make the expense of a column uneconomic. (But we haven't forgotten you – check out our SpartaDOS review for the Atari 8-bit this issue).***

But I'll tell you what. If we get 15 – just a measly 15 – requests (from different people, and not all from the same user club, yes we mean you, Bournemouth and Poole Atari

SNIPPETS

ST A1 OK

Why can't my operator get my ST around *Borodino*? I'm so bored. Contrary to J Searle's belief computers can think. They have more AI than perhaps you credit your readers.
A Davis, Reading, Berks

● *I presume you're not a farmer, or else AI will mean something different to Artificial Intelligence. I also presume you're not a woman, or else ST will mean something different to the Atari Sixteen Thirtytwo.*

SOFTWARE SHOW

The software show magazine was as bad as the program!
Dave Foster, West Midlands

● *I missed both. Thank goodness.*

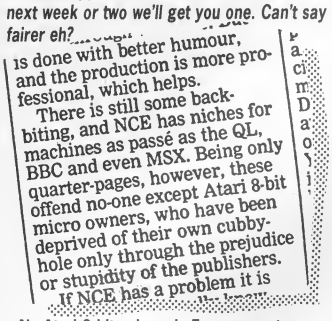
LEFT BEHIND?

Are Star UK the only company to sell (or make) left handed Amiga 500s? (Page 8 Express 25). I have had my Amiga for nearly one year now and have been chuffed to bits with it.
David Buttle, Newton Aulliffe, Co Durham

● The advert is intriguing; perhaps it is a mistake. The Amiga pictured apparently has a mirror image keyboard. No doubt Leonardo da Vinci, who used to write mirror-style like this, would have loved it.

● The left-handed Amiga is very good for working in right-to-left scripts like Arabic

User Group) for an Atari 8-bit column in the next week or two we'll get you one. Can't say fairer eh?


is done with better humour,
and the production is more pro-
fessional, which helps.
There is still some back-
biting, and NCE has niches for
machines as passé as the QL,
BBC and even MSX. Being only
quarter-pages, however, these
offend no-one except Atari 8-bit
micro owners, who have been
deprived of their own cubby-
hole only through the prejudice
or stupidity of the publishers.
If NCE has a problem it is

• No Atari 8-bit column in Express – yet...

PIRACY PT. 388

Everyone has, or will have in the future, an illegal copy of a music album. The familiar scenario of two friends talking:
"I love the new FYC album".
"Oh, I've got that. I'll tape it for you if you like".
Sound familiar?

Let us examine another set of circumstances. Walking down the street one day you spy a tenner lying on the pavement. Do you think 'that's not mine. It belongs to someone else' and walk straight past it? Do you pick it up and take it to the nearest police station? Do you ****!

Into the pocket it goes, then you take it for a trip to the pub.

The friend from above offers you a copy of the latest release from "Unimaginative Ocean" for nowt. Do you say "no thanks. I'll just nip down to Smiths and spend twenty quid on it if it's all the same to you". Likely or what?

Why do we indulge in these highly illegal activities? Opportunism. (Opportunist – n. a person who adapts his actions/ responses to take advantage of opportunities and circumstances.)

Human nature, being what it is, gives us many different failings, one of which is the something for [next to] nothing syndrome. For example, Bank Holiday Saturday at the supermarket when all the 'date up' perishables are reduced. The customers would cut your throat to get 10p off something whether they really wanted it or not.

I am a self confessed opportunist (oh the shame!) and I possess illegal copies of both games software and music albums, but that still doesn't stop me spending hundreds of pounds on the legal stuff.
Name and address supplied

● *I can see no connection, John, between buying a cream cake from your supermarket in Handsworth Wood, Birmingham, for 25p instead of 35p because it's reduced, and pirating software. There's a great difference, Mr Bedworth; one's legal, the other isn't.*

*However, as you point out, piracy is never a simple decision and often arises through opportunism and social pressures. And what do you mean, do I ****? Don't ask personal questions!*

MASTER STROKE

For all those A500 owners wanting to buy Dungeon Master, don't worry! Foster Enterprises *Dungeon Master* for the A500 for £160.00 – including a free memory upgrade. This is from the same people who brought you the 20Mb hard disk for the ZX81!

Let me be the first to praise Silica Shop for their very helpful service and quick delivery and secondly Homesoft for their quick delivery (arrived next day) in spite of typographical errors in their ads in *Express*.

My favourite items in your mag are the game reviews, Amiga Blit and the way 'New' slants on the front cover. Keep up the good work, oh I nearly forgot thanks goes to Emma Heggie from Salisbury for telling me to buy an Amiga instead of the ST and a quick hello to any 'Sat' players (PBM).
Dave Foster, Warley, West Midlands

● *Well, you can probably get the upgrade and the game cheaper separately if you shop around, but there you are. Sounds like the furniture shop in Yorkshire that used to sell carrots for £350 with a three-piece suite free to get round the Sunday Trading laws.*

CHEAP GAMES

There have been many complaints recently about prices of computer software, especially for Amiga/ST/IBM etc.

However, these people are just looking in the wrong place. I had stumbled on an advert in *Express* for (name deleted – read all the ads, you lazy lot! –Ed.) They had a list of several games and unbelievable prices. Dubiously at first I sent off for *Purple Saturn Day* and *Defender of the Crown* on the Amiga and a membership fee of £4. Both these games together would commercially have cost £45. I got them, plus membership, for £26.50. I received them within 3 days of ordering plus a 700 game long catalogue. The best bit was they had just reduced *Purple Saturn Day* to £6.99 (cheaper than the RRP of a C64 tape) and so they gave me six pounds off next purchase! Amiga games start from £3.49 and they also do Amstrad CPC (from 99p!), Amstrad PCW, Atari 800, ST C64, PC, Mac and Speccy. There's no excuse for idle complaints and making excuses for piracy.
Jasper Thornton, London

● *Absolutely!*

EXPRESS NEEDS YOUR HELP

We're looking for Britain's most interesting computer stories. Is your bedroom full of games? Has your next-door neighbour built an extension for their Cray? Does your six-year-old kid program in C? Have you hooked up your washing machine to your QL? We want to find
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Note: Factfiles are question packs only and require the Answerback JNR Quiz

PRINTERS

All printers listed have a ten inch (A4) carriage, are EPSON compatible, and feature friction and tractor feed mechanisms for continuous or single sheet paper. All prices include the necessary cable (except P.C.W. 8256/8512). Please call now for advice.

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CHOICE WORDS

Probably the single most useful program you can possess is a word processor. Letters, school and college work, business correspondence, reports, even that novel or TV sitcom. But get the wrong package and you could end up wasting more time and paper than you save. Neil Booth reveals the right package for your machine and your needs...

The basic principles of a word processor are, as you might guess, pretty basic in principle. You compose your documents on screen, can save them to disk, reload them, edit them, and print them out at your leisure. Text can be moved around between documents, copied and deleted in chunks, certain words or characters automatically replaced by others, the words checked for spelling, counted in an instant...

The advantages of storage on disk is pretty obvious. You can keep copies of all your correspondence, instantly available for recall; that contract for your previous employee can be used for the next with only minor modifications instead of complete re-typing; your thesis or novel can be edited and re-edited, fine-tuned and polished until it's perfect. And you can probably embellish your prose with italics, bolds, different size fonts, even graphics and pictures.

While even the worst program is still streets ahead of a typewriter, there can be things to watch with a word processor. It must be able to handle all the characters you need printed; your thesis on Russian Literature will look messy with all the Cyrillic handwritten in, and on a more everyday level you don't want to be wasting three weeks learning how to make your printer produce £ signs instead of $ or # characters.

Most importantly, you also want the layout to be handled easily; nothing looks more naff on a business letter than having the margins wrong and some lines hanging over the edges. Just as important, if you write seriously you will need something pretty fast that can shunt text around quickly. Finally, and even more importantly, if you have specialist needs – graphics for your local or club newsletter, or special languages such as Greek or Hindi – you obviously have to choose with care.

More important still is price. Word processing programs can cost anything from £5 to £300, and to be honest the correlation between price and performance can be arbitrary.

What can they do?

Even the most basic word processor – a sub-£50 package say – should be able to do things like:

- **Save documents to, and load them from, disk**

Well, this one's pretty obvious.

- **80-column wide editing**

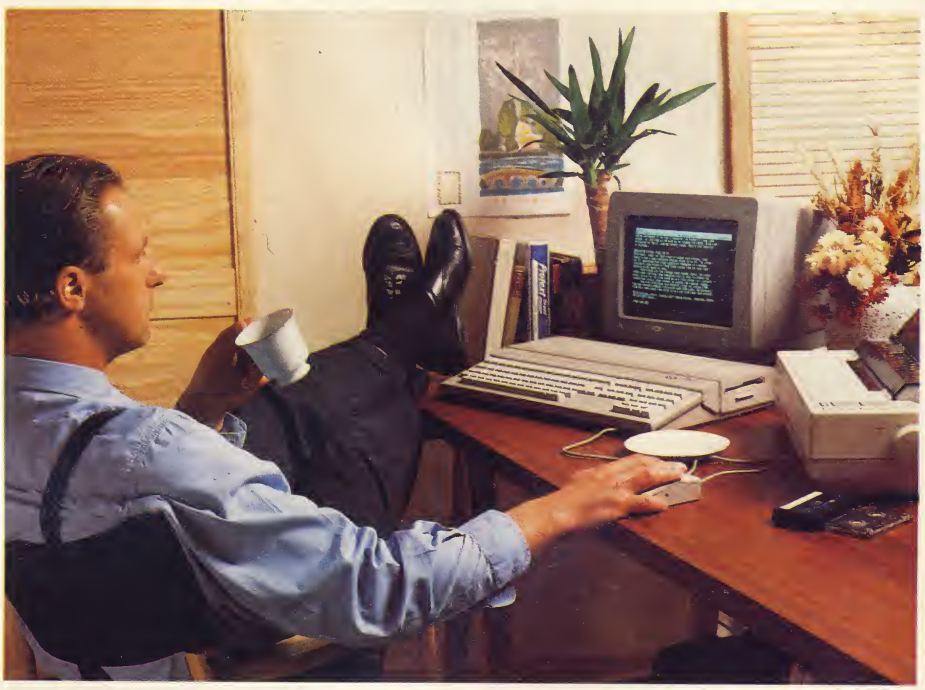
You want to be able to display a whole line on screen (if your screen is wide enough) or else you end up shunting back and forward looking at each half of each line. Good practice for Wimbledon but not much fun otherwise.

- **Set up and use different layouts**

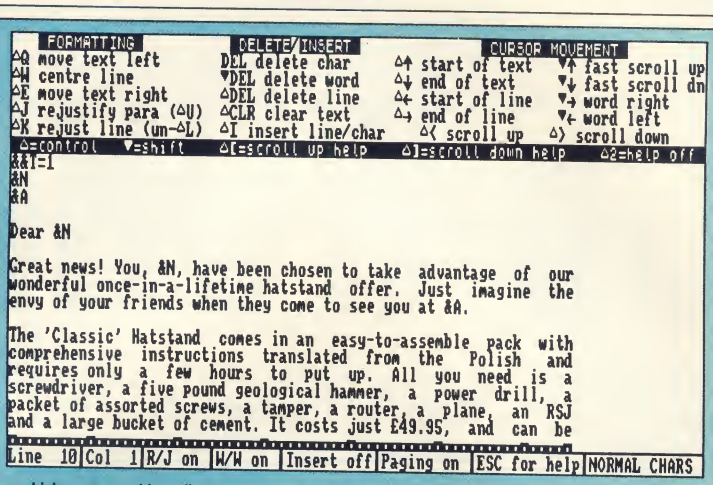
Settings of margins, tabs and so on can be saved.

- **Find and replace**

You want to move to the place in the document where 'Maria' occurs; using the find facility you can do just this. Replacing text lets ➤



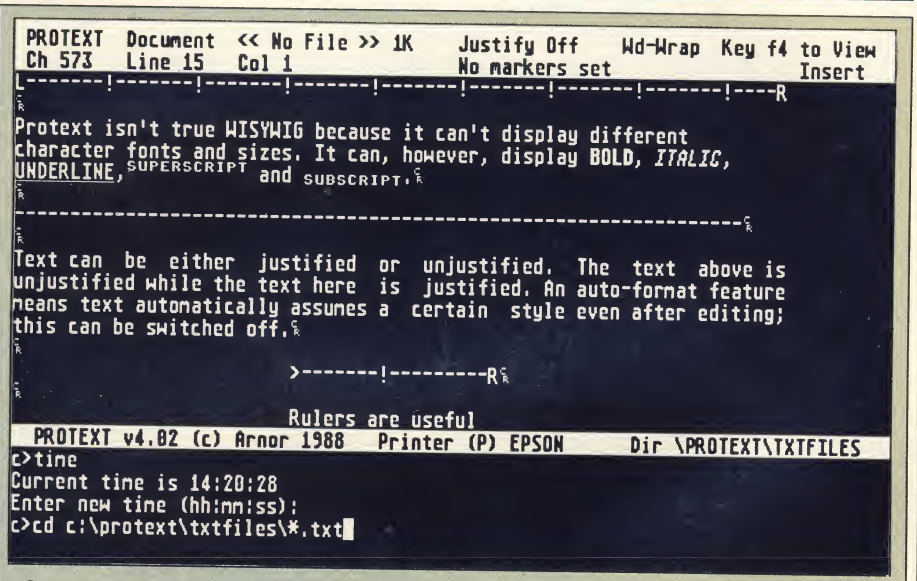
• Choose the wrong word processor and you're in for a lot of frustration and wasted paper


FORMATTING
DELETE/INSERT
CURSOR MOVEMENT
^Q move text left
^W centre line
^E move text right
^J rejustify para (^U)
^K rejust line (un-^L)
DEL delete char
▼DEL delete word
^DEL delete line
^CLR clear text
^I insert line/char
^↑ start of text
^↓ end of text
^← start of line
^→ end of line
^(scroll up
▼↑ fast scroll up
▼↓ fast scroll dn
▼→ word right
▼← word left
^) scroll down
^=control ▼=shift ^[=scroll up help ^]=scroll down help ^2=help off
&&T=1
&N
&A
Dear &N
Great news! You, &N, have been chosen to take advantage of our wonderful once-in-a-lifetime hatstand offer. Just imagine the envy of your friends when they come to see you at &A.
The 'Classic' Hatstand comes in an easy-to-assemble pack with comprehensive instructions translated from the Polish and requires only a few hours to put up. All you need is a screwdriver, a five pound geological hammer, a power drill, a packet of assorted screws, a tamper, a router, a plane, an RSJ and a large bucket of cement. It costs just £49.95, and can be
Line 10 Col 1 R/J on W/W on Insert off Paging on ESC for help NORMAL CHARS

• Tasword is a favourite budget program across a variety of machines. For the price of a meal out you get all the basics with good printer handling.

Everything is done by commands – [CTRL]W to delete a word, for example – which may take some time to get used to. But it's quick once you do, and there are help screens you can jump into at the press of a key to remind you which command does what.

Note the & characters which denote mail merging at work. Here the &N stands for a name and the &A for an address contained in a name-and-address list, stored as a normal file and denoted by the &&T=1 in the first line. When this document comes to be printed, a letter will be printed for each name in the name-and-address file with the name inserted at the position of the &N and the address at the &A.


PROTEXT Document << No File >> 1K Justify Off Wd-Wrap Key f4 to View
Ch 573 Line 15 Col 1 No markers set Insert
Protext isn't true WISYWIG because it can't display different character fonts and sizes. It can, however, display BOLD, ITALIC, UNDERLINE, SUPERSCRIPT and SUBSCRIPT.
Text can be either justified or unjustified. The text above is unjustified while the text here is justified. An auto-format feature means text automatically assumes a certain style even after editing; this can be switched off.
Rulers are useful
PROTEXT v4.02 (c) Arnor 1988 Printer (P) EPSON Dir \PROTEXT\TXTFILES
c>time
Current time is 14:20:28
Enter new time (hh:mm:ss):
c>cd c:\protext\txtfiles*.txt

• Protext, the writer's word processor, is a consistently high scorer on all the machines it is available for – PC, ST, Amiga, PCW and CPC. It has limited display of effects on screen (but not on the CPC or PCW versions).

Layout is handled with 'ruler lines', a common device of word processors. The position of various characters in the ruler line – the ones with the L or >, R and ! marks – determines the margins and tab positions.

Note the MS-DOS-like command line with its c> prompt. Protext has a variety of goodies, like the 'time' feature here – calculator, memory monitor, typewriter emulator and so on. Type PANIC and see what happens!

you demand that all occurrences of, say 'Maria' be replaced by 'Fred' automatically. Limited use if it applies only to text (the ridiculous consequences are obvious – 'Fred, Fred, I've just met a girl named Fred') but extremely useful if you can replace exchange returns, tabs, bold and italic setting commands and so on. (It's amazing how often you need to change all italics to underline commands or exchange all double returns for return-tabs).

● **Block moves**

You can mark out blocks of text, anything from a letter to a chapter, and move this block somewhere else in the document, or delete it all, or copy it, or perhaps save it as a separate file. The equivalent of marking out a chunk of text on a manuscript and writing instructions to the typesetter like 'cut this' or 'move this to end of page 1' or whatever.

● **Use a variety of styles and sizes of print**

The program inserts codes in the document that aren't printed but tell the printer to start printing in italics, or stop printing bold, or whatever. It'll be down to your printer what you can do. Word processors usually come set up to run 'Epson compatible' printers, which is most of them.

● **Count the words in a document**

Should be fast – only a second or two for a few thousand words.

Crack of the wp

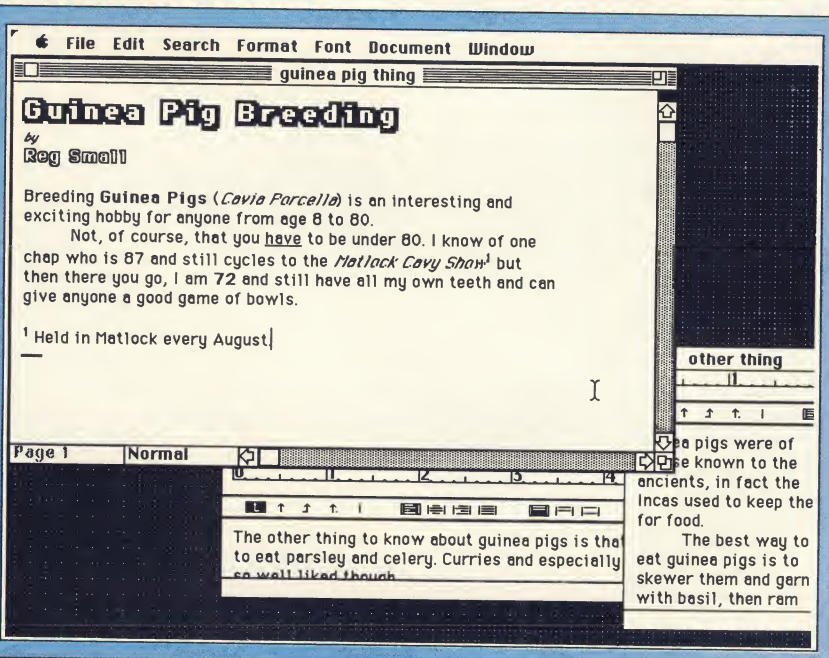
More sophisticated programs – between £50 and £100 say – offer:

● **Checking of the spelling of each word in a document**

The program stores on disk somewhere a dictionary and checks off each word in your document against the dictionary. Only checks for spelling, not for sense; 'two bee ore knot too bee' would pass OK. Useful for serious writing and correspondence, weeding out those typos that appear in documents; 'ot be or notto nbe' would have 'ot', 'notto' and 'nbe' queried and give you the opportunity to store them in the dictionary, ignore them or alter them. The more words in a dictionary, the better; 10,000 is very small, 100,000 very big. You want one which can edit the dictionary (you may want to remove the American spellings that are there, for example, or add your own dictionaryful of technical terms).

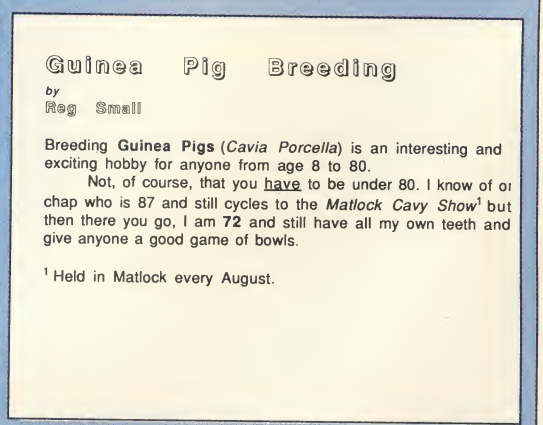
● **WYSIWIG**

Stands for 'what you see is what you get'. The idea is that you can see on on screen exactly how your document will print out, including italics, bolds, changes of size, reversed out text etc and with correct layout and margins. Obviously a great potential paper-saver, as in theory you should only need to print the thing out once to


File Edit Search Format Font Document Window
guinea pig thing
Guinea Pig Breeding
by
Reg Small
Breeding Guinea Pigs (Cavia Porcella) is an interesting and exciting hobby for anyone from age 8 to 80.
Not, of course, that you have to be under 80. I know of one chap who is 87 and still cycles to the Matlock Cavy Show[1] but then there you go, I am 72 and still have all my own teeth and can give anyone a good game of bowls.
[1] Held in Matlock every August
other thing
Page 1 Normal
The other thing to know about guinea pigs is that
to eat parsley and celery. Curries and especially
so well liked though
ea pigs were of
e known to the
ancients, in fact the
Incas used to keep the
for food.
The best way to
eat guinea pigs is to
skewer them and garn
with basil, then ram

• WYSIWIG at work – this is Microsoft Word running on a Mac. All the effects you put in such as italic, bold, underline, shading, outline, superscript and different point sizes are shown on screen exactly as they print out – compare the screen appearance with the final printed version. Note that there are three documents open simultaneously in the three windows.

WYSIWIG is clearly great if you're working on a complicated layout, but can cost you...


Guinea Pig Breeding
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Not, of course, that you have to be under 80. I know of o chap who is 87 and still cycles to the Matlock Cavy Show[1] but then there you go, I am 72 and still have all my own teeth and give anyone a good game of bowls.
[1] Held in Matlock every August.

get it right. Limited on some word processors. Useful, and possibly essential if you do a lot of fancy layouts.

- **Macros**

If you have a sequence of operations you often use – backing up files, perhaps, which involves copying lots of files from one disk to another – you can make a document containing these instructions and then run the lot (the macro) with one command (like a batch file).

- **Do mail merging**

For business users or anyone running a club, an absolute must. In one document you keep a name-and-address list, in another a letter which effectively says 'Dear (insert name here), You could be one of the first people in (insert name of street) to own our wonderful hatstand...'. Can thus churn out 'personalised' letter to as many people as you like automatically. Sophisticated ones have arithmetical and conditional functions, calculating VAT for you or only printing letters to people who owe you money.

- **Run with laser printers**

Three-line wp

Really up-market packages (a few hundred quid) will allow you to:

- **Include graphics in a document**
- **Automatically place footnotes, generate indexes, bibliographies and tables of contents**
- **Work on several documents at the same time, all visible in superimposed windows**

Alongside is the *Express* guide to the best in word processing packages for each machine for the sort of applications you might require – leisure, business correspondence, academic work and writing.

For virtually all machines, there are all-in-one packages available of the *Mini Office* genre which offer word processor, database, spreadsheet, graphics etc etc all in the same package. Usually the word processors on these are quite adequate for casual use – small-scale business correspondence, personal letters, the odd bit of writing and so on.

Which machine?

If you're buying a machine mainly to word process, the Amstrad PCW is probably still the best, though things are not so clear cut as they were. For £349 you can get a PCW8256 with *LocoScript*, a built-in printer and monitor, and lots of other goodies. The whole lot is already set up so you just plug in and go – no messing about with printer drivers or whatever. For £449 (plus your old typewriter) you can get a PCW9512 which has the faster *LocoScript 2* and a daisywheel printer to give electric typewriter quality documents.

However, other possibilities exist. Buy an ST plus cheap SM124 mono monitor (lovely clear resolution for word processing) and cheap printer and you can be word processing for as little as £500, with more expandability. New software is coming out all the time for the ST – more games than you could play in a lifetime (certainly more than you can ever afford), thousands of serious and business applications and a wealth of PD software. Even Hindi, Urdu, Farsi, Cyrillic, Arabic and a number of other alphabets are available.

If you need to write on the move, try out the Cambridge Computers Z88 (now available in a £200 bundle including mains adaptor, RAM pack and case) or one of the Tandy T portables (£300 or so). Both have built-in wp software, plus sundry other goodies like calculators, diaries and BASIC. Best to transfer your documents to disk on your home computer regularly, as when the batteries fail, your data disappears.

Any mainstream home micro can be used for word processing though, so if you see that unrepeatable bargain at your local computer auction or in the classifieds, you're safe to assume that you can word process with it.

Ben Elton, Stephen Fry and Douglas Adams – all computer enthusiasts – write their masterpieces on Apple Macintoshes. If you can afford £5,000 for your word processing setup, you are

Words to remember

PC

The PC probably has more wp programs than any other computer. Most of the industry standards – *WordStar*, *Microsoft Word*, *WordPerfect* et alia – are available. If you use them at work and want them at home, you can do so, but it'll cost a few hundred pounds. Academics or really serious writers will find *WordPerfect*'s ability to handle multiple documents at once, generate indexes, footnotes and tables of contents invaluable (details 0932 231164). No graphics though. Unless you've invested heavily in one (e.g. your office has all been trained to use one of them) there are more economic alternatives though.

Anyone on a budget should look at *Tasword* (£30, Tasman, 0532 438301), a good basic package with good printer control handling and a great reputation. *Protext* is for serious writers (see PCW for details) and *Multiwriter* (£100, Newstar, 0245 265017) offers a similar range of features. (Rumour has it that *LocoScript* – see the PCW – may be out this year for the PC).

There's plenty of PD software available – all for free, or at least the price of a disk. *Galaxy* is a *WordStar*-like program which includes menus and a spell checker. Details from Advantage (0242 224340) or the PD Software Library (0892 663298).

ST

The ST comes with *First Word*, quite an adequate wp for occasional use. The enhanced *First Word Plus* (£79.95, Electric Distribution 0480 496789) offers GEM windows and menus, allows text and graphics to be mixed, and offers mail merge. Slow in use though; professional hacks will prefer *Protext* which doesn't offer graphics or exotic print styles or anything but is fast and powerful (£99.95) – see the PCW section for details.

Wordup (HB Marketing, 0895 444433, £59.95) is almost a DTP package and allows graphic import, text to flow round the shape of graphics, and lots of different styles and point sizes on screen and printer. Good for anyone who wants to produce fancy documents.

Other 'standard' wps are available (*Microsoft Word*, for example) but implementations tend to be poor.

Signum (0252 874406) gives you the chance to work in a variety of alphabets – Hindi, Urdu, Farsi, Cyrillic and so on.

Amiga

For budget users, *Kind Words* (£38, The Disk Company) offers good value with a spell checker and import of graphics. *Protext* (see PCW) is also available and is great for the writer who churns out words.

WordPerfect is available for the academic or really serious author (£175, see the PC). *Excellence* (£154, Micro Systems) does just about everything *WordPerfect* does and more: import graphics, check spelling as you type, check your grammar and offer suggestions.

PCW

LocoScript comes with the machine; but you can (and if you have an 8256 or 8512, ought to) upgrade. *Protext* is much faster, more versatile, is better at moving text around and has a word count that is absent from *LocoScript*. It comes with a good spell checker, mail merge facilities and a lot of thoughtful add-ons like a calculator and two-file editing. It works from a CP/M/MS-DOS-like command line and is available for the PC, CPC, ST and Amiga as well.

LocoScript 2 is a bit faster than *LocoScript* but where it loses out to *Protext* on speed and flexibility it makes up with a wider range of characters (Cyrillic and Greek built in plus options on a dozen different print styles; it can also work with any printer in the world!). It's also easier to get involved layouts right, where you have lots of tabs and different type sizes. Mail merge and (rather slow) spell checker available separately. *LocoScript* is menu-driven with command line like shortcuts too.

Other packages are available (*Tasword*, *WordStar*, *NewWord*, *Mini Office*, *Superwriter*) but they don't really compete.

LocoScript 2 (Locomotive, £25, 0306 740606) is fine for leisure and business – letter-writing and doing handbills and so on. Anyone serious about their word processing – writers, academics et alia – should invest in *Protext* (Arnor, £60, 0733 68909).

CPC

Quite a range of wps available for the underrated Arnold, including *WordStar*, but you don't have to break the bank. *Tasword* (£20, see PC) is a good budget processor, narrowly behind *Protext* (£26.95, see PCW). You can get *Protext* on ROM for £39.95 and it's well worth it – there up and running as soon as you turn on. Either package is quite powerful enough to handle small business correspondence or tackle 'serious' writing.

C64

Word processors on the C64 are difficult to get now, being discontinued. Highly regarded *Easy Script* (£50 or less – phone round the mail order places for the best offer). *PaperClip* (£50 or so) is probably better – one of the best 8-bit wps around – but again difficult to obtain, and from mail order only.

Spectrum

Tasword (£24.95 on the +3, £19.95 for the +2, £13.90 for the 48k, see PC for details) is the Spectrum user's favourite – and note the special versions for each different Speccy.

BBC

Highly regarded by Beeb users is *Intaword* (£56.35, Computer Concepts, 0442 63933). It offers 40, 80, and 105 column editing, and comes on ROM. A spell checker is available for £59, also on ROM.

QL

Quill comes with the QL, an adequate word processor. It's worth getting *Turbo Quill Plus* (£13 or so) and *Speed Screen* (£20) to upgrade the basic system and speed up screen update though. Check the ads in QL magazines.

Atari 8-bit

Atariwriter, on disk and with a spelling checker, offers two-column printing, two-document editing, plus all the basics. Costs £37.95, available from anywhere that sells Atari 8-bit software – in case of difficulty phone Silica Shop on 01 580 4000.

Printer power

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- Panasonic KXP1081 (£110) – Epson compatible and fast
- Citizen 120D (£120) – another good budget printer
- Star LC-10 (£200) – everyone's current favourite with a variety of fonts and sizes
- 24-pin NEC P2200 (£310) – best bargain for 24-pin quality

The prices will vary, and the ones quoted here are what a competitive mail order house might charge.

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The DOS boss

MS-DOS – you either love it or hate it, but either way you're stuck with it. Or at least you were. Simon Williams looks at one way out...

TopDOS ● Frontrunner Development Corp ● £69.95 ● Paperback Software Tel: 0245 265017

There are a lot of people who think MS-DOS is unfriendly, difficult to live with or downright geriatric. There are others, a smaller number, who think it is verbose and a distinct comedown from CP/M 2.2. Operating systems are very subjective things, but whatever you think of them, you'd probably be interested in anything that would improve the layout of information on your screen, offer you a menu-based file copying utility, an instant RAM-based editor and a way of renaming any DOS command or series of commands to create your own utilities. This is what *TopDOS* offers, and with little memory overhead.

The program comes on a single disk with a well compiled manual and a quick-reference card. There's no installation process, just copy the files to a working floppy or sub-directory of your hard disk and type TOPDOS to run the program. The DOS prompt becomes >> to indicate that *TopDOS* is running, and a load of new commands or extensions to DOS are available to you. *TopDOS* runs as a memory-resident utility, taking up less than 40K, but can be removed from memory with a simple command if you need all the RAM you can get.

The extensions to DOS are many and range from extra parameters, to completely new commands, to separate programs in their own right. There is a consistent set of parameters which can be applied to any *TopDos* command that supports them. Thus the /E parameter, which means 'sort by extension', can be used with the DIR, COPY, MOVE, DEL, ERASE, TREE and TREECOPY commands. There are 20 of these options, which gives you some idea of the comprehensive design of the program.

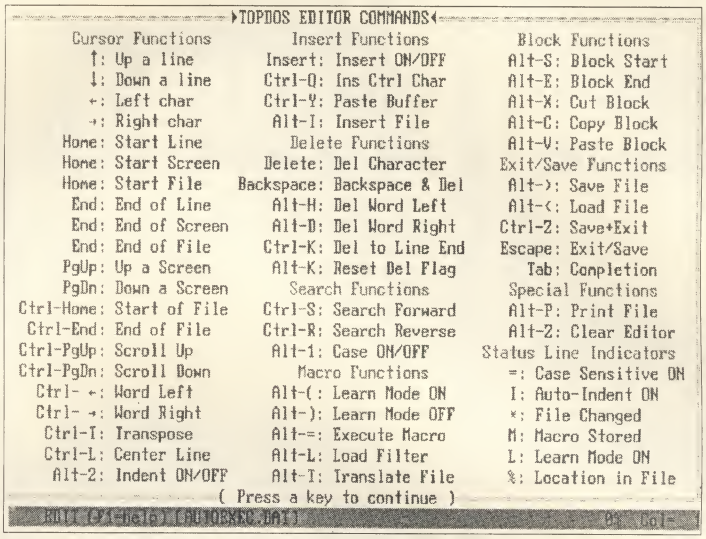
The command line itself, where you type commands to DOS, has been overhauled. You can now edit the command in insert or overwrite modes, call up the last 25 or so commands to re-execute them, and let the program complete any command by selecting a suitable filename for you. You only have to type enough characters to leave the end of the command unambiguous. If there's any ambiguity, *TopDOS* offers all the possible endings as a menu.

New commands include MOVE, which copies a file or files and removes the original in one operation, HELP, which offers screens of assistance on any command, WHEREIS, which finds a named file anywhere in the directory structure, and STUFFKEY, which inserts key presses into the keyboard buffer (useful in batch files or aliases).

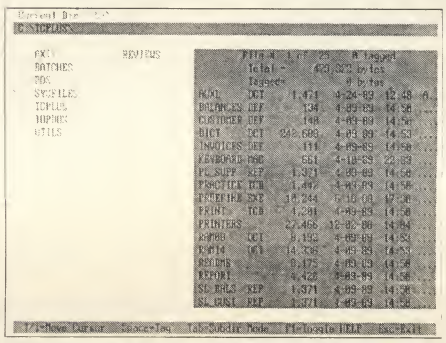
Complete programs include the on-line editor and the TREE command, which is like a mini *Xtree* and offers an easy way of traversing a directory structure and copying files, manipulating directories and changing file attributes.

It might sound trite, but once you've started using *TopDOS*, you do wonder how you ever managed without it. It provides most of the extensions to DOS you could want in a neat, clean package, takes up very little room and as far as far as can be assessed conflicts with few, if any, other programs. And you can still send commands through to DOS, if you ever need to!

✪ ✪ ✪ ✪ ✪



• The default command keys in the TopDOS editor. You can make them what you will, though



• The combined directory and file display of the TopDOS TREE utility

Live at peace with your editor

If you regularly make changes to your batch files, want to examine documentation files or address the occasional envelope, you are probably for ever on the look out for a handy editor. *TopDOS*'s EDIT is just such a beast. It has no pretensions to being a word processor, but offers most of the features a programmer or general DOS tinkerer could want. It's small, quick and produces completely 'clean' ASCII files with no odd-ball control characters in them.

A full complement of cursor controls, search and replace and block functions are supplied, as is a system of macros which lets you define your own commands. As you might expect with *TopDOS*, you can redefine any of the controls to suit your preferences, so you could have *WordStar*, *WordPerfect*, *TopCopy* or even *EMACS* compatible commands if you want them. The help screen is updated with the new settings, as well.

There are inevitably a few entries on the 'wants' list, not least of which an option to create automatic backups when saving files. Techies may want to live on the wild side, but there are a good few users who would value this extra security. There are also brief details in the manual of the use of filters to alter text (things like stripping high bits from *WordStar* files), but there appears to be none supplied and no details of how to write one.

Macros by any other name

You can, if you so wish, write batch files in MS-DOS to perform weird and wonderful functions not provided as standard within MS-DOS. You can do this in *TopDOS* too, but you can also assign the files to function keys. This system of macros and aliases is very powerful, and the set of function key definitions supplied with the program are good examples. A macro can be up to 75 keystrokes long, and the commands made up from these keystrokes can themselves be *TopDOS* commands.

A *TopDOS* alias is like a cross between an internal DOS command and a batch file. You define a series of commands and echo statements as you would a batch file, but assign it to a *TopDOS* alias which you then type to execute it. The first command of an alias never displays, so a quick 'echo off' will hide the complete function of the alias file. About 9K is put aside in RAM for aliases, but each one can only be 75-80 characters long. This seems a silly limit – why not allow any combination of length within the overall space constraint?

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DOS well for itself

New products are pretty thin on the ground for the Atari 8-bit machines, and owners are always bemoaning the fact that they have a very usable machine but no new soft or hardware . But now comes SpartaDos X, the definitive operating system for the 8-bit Ataris. Millie Jackson takes a look...

SPARTADOS ● £49.95
FRONTIER SOFTWARE (0423 567140)

With the exception of one notable company in this country, the only manufacturer in the world to produce innovative hard and software is ICD inc of America.

The company is based in the state of Illinois and is producing some of the best ever products for the 8-bit machines. The range includes various interfaces, disk drive enhancements, a real time clock and a superior DOS upgrade intended to replace Atari's own offering. After considerable success with this DOS (known as *SpartaDos*), ICD has improved it even further, and has now released it as *SpartaDos X* – the definitive disk operating system for the XL, XE and all other Atari 8-bits.

The first thing noticeable about *SpartaDos* is that it comes on cartridge. ICD has managed to piggy-back 64K of ROM memory into a standard cartridge and the whole thing is set-up as if it was a super fast disk drive – i.e. you can carry out disk directory and get a list of files.

• One of the many Atari 8-bit machines that will benefit from SpartaDOS X

Because *SpartaDos* comes on cartridge, you can use DOS at any time without having to load it up from disk. You don't need to write DOS files to newly formatted disks either, thereby effectively increasing the capacity of disks that you use. The cartridge itself even has a port to allow you to connect another cartridge such *AtariWriter* or ICD's own R-TIME 8 clock cartridge.

SpartaDos supports all drives form the old 8 inch format to hard drives, including such oddities as the Indus GT drive rarely seen in this country. But what is the DOS like in operation? Well, if you've ever seen MS-DOS/PC-DOS, *SpartaDos* is exactly the same.

SpartaDos started life as a command line DOS (unlike Atari's own menu-based DOS) similar to MS-DOS, but ICD have taken this one step further by making it identical.

All the commands you would expect are present, such as DIR, DELETE, CD, MD etc., *SpartaDos* supports subdirectories and time and date stamping and ICD has even bought a licence to use the public domain utility *ARC* for file compression. It is provided on the cartridge with DOS and available at any time. When you're using standard drives such as the 810 or 1050 with between 90 and 127K on disk, *ARC* really comes into its own. Using file compression you can get a whole lot more on your disks and increase your productivity by leaps and bounds.

SpartaDos is completely compatible with all other available disk operating systems for the 8-bit machines, so there's no need to copy all of your existing files to the new format – they can be read directly.

ICD's *SpartaDos* is one of the best products to be released for Atari's much-neglected 8-bit machines. If you have an XL or XE then invest £50 in *SpartaDos* and you won't be disappointed. ●

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Matter of fax

A small add-on to your personal computer can turn it into a fax machine. Jerry Glenwright reports...

In case you hadn't noticed, there is a communications revolution taking place at this very moment. It's a quiet revolution – no steam engines or Luddites smashing them this time around. Instead, the way you behave in your working and home environment is being subtly changed by the introduction of new and ever faster methods of communicating with the people around you.

Satellite dishes, cellular telephone networks and modems are all taking off in a big way. Engineers predict that by mid 1990s, those that want them will have personal 'communicators' à la Star Trek (beam me up, Scottie...), allowing communication with 100 million people all over Europe. Of course, it's up to you whether you have a reason *why* you'd want to talk to 100 million people, but at least the capability will be there.

And now you can have facsimile, or fax as it's popularly known. Fax allows you to transmit handwritten or typed messages, photographs, or any other paper documents anywhere in the world via a fax machine connected to the PSTN (Public Switched Telephone Network) – the 'phone system to you and me.

The idea behind the fax machine was dreamed up 140 years ago but is only now becoming a reality. In the last two years fax has started to make a real impact on businesses up and down the country.

Postal strikes are particularly conducive to the furthering of the use of fax machines. During the last postal strike, sales of fax machines quadrupled as businesses found any method they could to get important mail to clients.

Today, all but the smallest businesses regularly use fax for their urgent mail, knowing that the missive will reach its destination in (almost) the blink of an eye.

But what is fax? How can you hand a paper document to a little electronic box and have that document reproduced faithfully and sent to a receiving machine anywhere in the world?

Scan and be counted

The fax machine incorporates a digital scanning device. When a document is placed in the machine, this scanner criss crosses the document in very thin lines. Electronic circuitry monitors the level of reflected light from the document and decides whether or not that particular 'bit' is black or white, thus producing a digital code. The digital code is converted into an analogue signal and transmitted down the telephone line. At the receiving end, the analogue signal is re-converted into a digital code and printed on thermal paper.

The resolution of the fax machine is typically 200 dots per inch horizontally and between 100 and 200 dpi vertically, hence the sometimes rather 'blocky' look of text and pictures of received faxes. To send a document measuring 8 x 10 inches requires 200 x 8 x 200 x 10 bits or 400K. Using a routine to squeeze all unnecessary spaces and other characters from the document, it can be reduced in size by a factor of ten, thus reducing transmission times.

Because the technology associated with the fax machine is so like that of the computer, the next logical step was to provide the PC with a fax card. There are now a number of suppliers who market a fax card for the IBM-PC and its compatibles, and they're usually significantly cheaper than equivalent standalone machines.

The device comes in the form of a card to fit one of the expansion slots of the PC. Although there is no scanner (many cards offer support for popular hand-held scanners), text can be directly faxed from word processor files and various forms of image and picture file, making the whole process very convenient.

Junk's sales

As well as convenience of operation, the fax card effectively negates the requirement for the hideously expensive specialised paper needed by the standalone fax machine. In the States, local telephone calls are free, and the latest advertising ploy is to send thousands of junk faxes – fine, but all the received faxes have to be printed out, thus using up all your paper, and the resulting cost of new paper can be prohibitive.

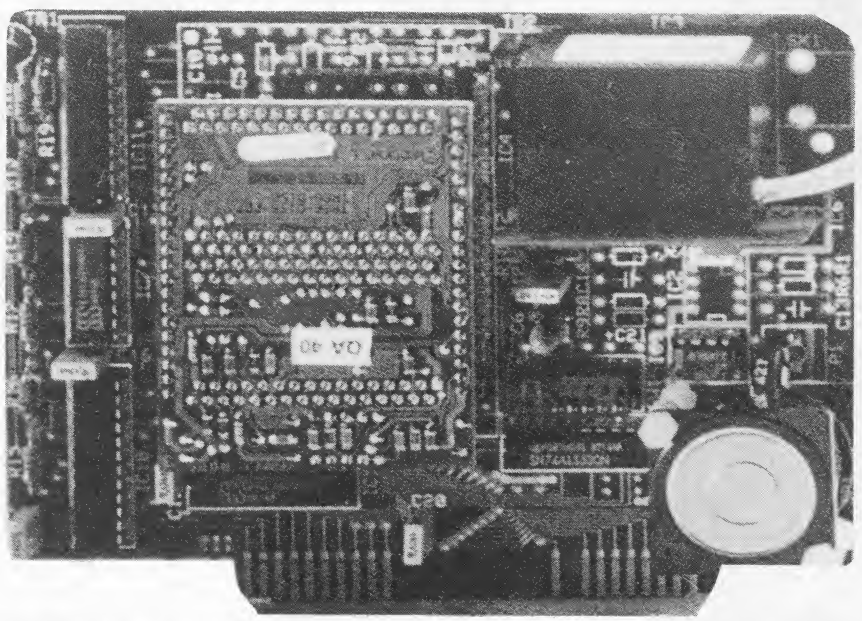
Using a fax card, interesting messages can be printed out on a standard dot-matrix or daisy wheel printer, or held in electronic form, read and discarded. OK, with the kind of charges BT makes for the use of its precious 'phone system, junk faxes aren't going to be quite the problem here that they are in the States, but it may happen.

Under software control, the card can log calls made using the fax, listing date, time, number etc, group faxing (i.e. sending the same fax to group of other fax machines) and setting the card to transmit the fax at cheap BT band rates.

Choosing the fax card depends upon how much moolah you have to spend and what features you require – the two go hand in hand. Fax card features are usually implemented via software but things to look for are graphics support, scanner support, auto dialling, print capture and call logging. At the cheaper end of the market, machines offer slow speeds and consequently longer transmission times. Slow speeds = longer transmission = big 'phone bills, so what you save in terms of price may quickly be lost when you receive the quarterly from BT.

Fitting a fax card is very simple. After removing the outer case of your PC, the card plugs into an available expansion slot. The only other thing to do is to set the IRQ DIP switches so that the new card doesn't clash with existing add-ons and you're ready to transmit.

To use the card is a simple matter of preparing a text or picture file to transmit, having the card dial the number and...that's it! It may be a few years yet before you can have your constituent parts beamed across the globe but, using fax, the documents making up the ephemera of your everyday life can be sent to your friends and business associates in the blink of an eye. ●



• The C-FAX SR fax card is typical of fax devices available for the PC

What's available

You've read the article, drooled over the pics and now you want the hardware...

● C-FAX SR. Priced at £199, this card offers incoming fax notification, fax storage to disk, can receive graphics, faxes can be veiwed on screen or sent to a printer and the card operates at 9600 baud. It can be obtained from SCS Computer Sales PLC, 24 Kingfisher Court, Hambridge Road, Newbury RG14 5SJ (0635 529229).

● C-FAX SR1. Big sister to the SR card which allows you to send text and picture files from within other applications. Incoming faxes are automatically stored on disk. Price is a reasonable £249 and the card can be obtained from SCS Computer Sales PLC, 24 Kingfisher Court, Hambridge Road, Newbury RG14 5SJ. Tel. 0635 529229.

● DR800 Fax card. More expensive than the C-FAX but offering a range of features including the ability to set the time for fax transmissions, allowing you to take advantage of BT cheap band rates. Available from CYCA Ltd, 287 Caledonian Road, London N1 1EG. Tel. 01 700 4004.

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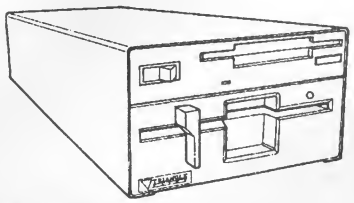

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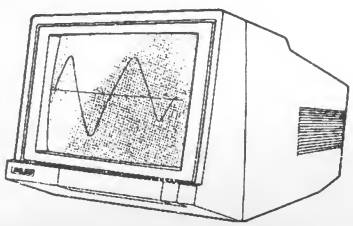

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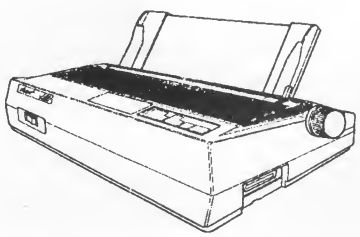

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DAISY WHEEL (T): Device used with printers to produce typewriter-quality text. The daisy wheel has a central hub with 'arms' attached in the form of a daisy petals. At the end of each arm there is a character – alphabetic, numeric etc. The arm swings forward and strikes paper through an inked ribbon thereby forming a character. Daisy wheels are slow when compared to other forms of printer technology (typically between 12 and 25 characters per second) but do produce excellent quality print. See also ***dot matrix***, ***thermal***, ***laser***.

DATABASE (T): A gathering together of related pieces of information, stored in meaningful way – the classical example is name-and-address lists. Computer databases speed up and make simple the storing of large amounts of data by their inherent ability to move around and store data electronically. The word is used to refer to the information itself, the files in which the information is stored, and also the software which manipulates the information. All home and small business computers can boast available database packages.

• The Juki 6100 daisywheel printer: typewriter-style print output

DATA (T): The raw units of information manipulated by humans or computers. Strictly, data are plural, but modern use has established that data (like information) is singular.

DATA PROTECTION ACT (LEGAL): Act which became law in 1987 requiring anyone who uses a database to register as a 'Data User'. (Some exceptions exist – clubs which store info on their members with their permission, for example, or databases which only refer to dead people).

The aim is to allow people to find out who has what information stored about them on computer – lists of Data Users together with who and what they store information on are in Public Libraries.

DATABUS (T): A series of electronic 'channels' which the central processor within a computer uses to retrieve data from the computer's RAM or ROM memory. The databus has a width calculated by the amount of 'bits' of information which can be transmitted along it at any one time e.g. 8 bits, 16 bits etc. Unfortunately, several manufacturers offering 16 or 32-bit microprocessors in their machines as a selling ploy have used cut down databuses thereby effectively 'strangulating' the central processor; i.e. a 16-bit processor using an 8-bit databus is receiving only half the amount of information it can process at any one time.

DATA GENERAL (CO.): American mini computer manufacturer founded in the early '60s and based in the famous silicon valley in California. Data General epitomises the 'fair-children' companies of the '60s and early '70s. The company is responsible for some very successful mini computers and even inspired a novel by Tracy Kidder ('The Soul Of A New Machine') detailing the development and design cycle of the D.G. Nova machine. With the decline of the mini computer Data General has been forced to adopt a lessor role in the computer industry.

DATA PROCESSING (T): Generic term describing the processing of data by machines and the industry built around it; i.e. data processing department, data processing professional etc.

DBASE II/III/III+/IV (T): Industry standard relational database package, which is powerful and flexible due to its built-in programming language, allowing users to program complex databases and generate reports. The *dBASE* program began life as *Vulcan*, a database package written by Wayne Ratcliffe. Ratcliffe formed the company Ashton Tate with George Tate and renamed *Vulcan dBASE II* (*dBASE I* never existed – the pair wanted the product to sound as if it had been around for a while!). Today, the product has evolved into version IV with many refinements and additions. See also ***Ashton Tate***.

DEC (CO.): Digital Equipment Corporation, a large manufacturer of mini computer systems based in America. Although DEC has a large amount of installations in the field and correspondingly high user base, the company is being forced to take a back seat as the micro computers and workstations of today offer raw computing performance similar to the mini computers of yesterday.

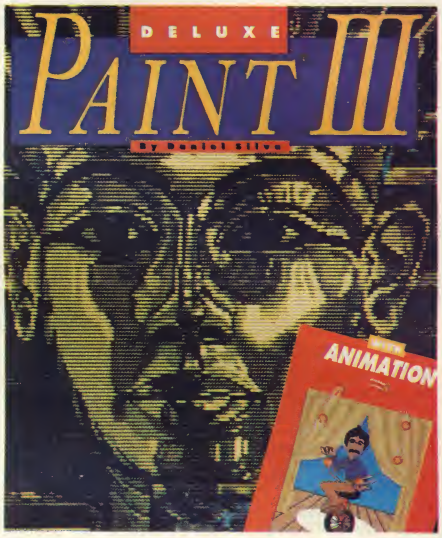
DEBUG (T): The process of ridding a computer program of all faults and errors. The debugging process is usually performed after the product has been in the field for several months i.e. when irate users of the product contact the company reporting spectacular crashes. See also ***bug***.

DEFENDER (G): Classic coin-op and the first to use horizontal scrolling.

DEFENDER OF THE CROWN (G): The first of Cinemaware's interactive series of role playing games. The game was the first to exploit the gaming power of the Amiga and put the machine and the company responsible for the game on the map.

DEGAS ELITE (GR): ST version of *Deluxe Paint* which, although lacking several of *Deluxe Paint*'s features is still one of the best paint packages available for the Atari machine.

DELUXE PAINT (GR): Regarded as the best and most popular art package for the Amiga. The package opens up the machine's power to the ordinary computer user.

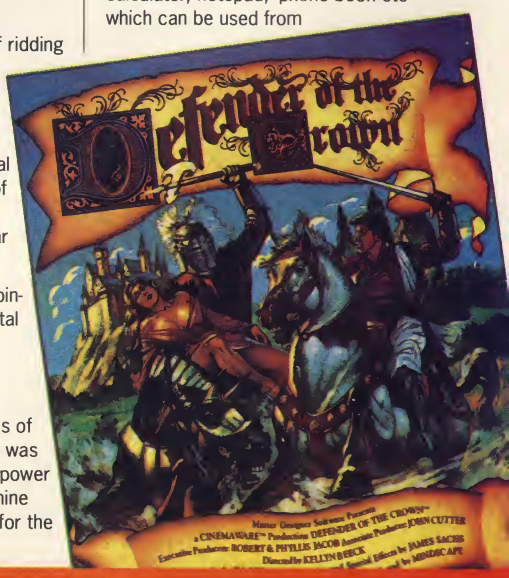


• Deluxe Paint for the Amiga: THE paint package for THE graphics micro

DESCENDER (T): The portion of an alphabetic character which descends below the line upon which the character is placed: g, y, and q are all characters that have descenders. Cheap printers are usually unable to print descenders, the descenders are printed above the line rather than below owing to the size of the print head, giving lower-case text an unusual appearance.

DESKTOP (T): User interface between computer and user which is employed by machines running window-type operating systems. See also ***desk accessories***.

DESK ACCESSORIES (T): A selection of programs such as a calculator, notepad, 'phone book etc which can be used from



Part 4 of the definitive Express guide to computing

the desk top operating system of a computer during the processing of another application.

DESKTOP PUBLISHING (T): Usually 'DTP'. The process of producing (designing, laying-out, and printing) professional quality documents electronically via a micro computer. Before the advent of the micro computer and DTP software, publications had to be designed on a drawing board with text and pictures cut and pasted onto paper. Nowadays, the whole process can be performed using a computer. The magazine you're holding at the moment was created in this way.

DIGITAL (T): The representation of information with electronic devices using only two states 1 and 0, on and off etc.

DIGITAL RESEARCH (CO.): Founded by Gary Kildall, the company is responsible for the CP/M operating system which was widely used from the late '70s until the mid '80s on small computer systems employing the Zilog Z80 processor. CP/M has undergone many changes – multi user, concurrent processing etc, and is still widely used today on machines such as the PCW.

DIP (T): Dual In-line Package. The device in which an integrated circuit is mounted, usually in the form of a black plastic case with legs allowing the chip to connect to the outside world.

DISASSEMBLER (L): A program which translates machine code numbers into a corresponding assembly language to aid debugging and programming. See also ***assembler***, ***assembly language***.

DISK (T): Magnetic disk of plastic or aluminium, encased within a cardboard sleeve or airtight case and used to record magnetically encoded information on its surface. Disks store anything from 80K to 300Mb of data and come in a range of sizes from 8 inches to 3 inches. The two main designs for disks are floppy and hard. In the former the disk is a flexible piece of plastic, in the latter an inflexible disk of aluminium. See also ***disk drive***.

DISK DRIVE (T): The device in which a disk is placed and which is used to read or write to and from the surface of the disk. See also ***disk***.

DITHERING (T): The mixing of dots of various colours to create new colours. The dots must be too small to the naked eye to be seen individually. The technique is used with computers to increase the intensity of a display when the resolutions of image and device coincide. Newspaper pictures which make up scales of grey with black dots of various sizes are an example. See also ***desktop publishing***.

DMA (T): Stands for Direct Memory Access and is the process of loading data directly into RAM memory without interference from a central processor, thus significantly speeding up the process of data transfer. Incoming data does not have to 'consult' the CPU before being placed in RAM.

DOS (T): Disk Operating System. The software which controls the use of disk drives on a computer system. The most popular DOS is the one provided by Microsoft, and used with the IBM-PC and its compatibles. Instructions issued by a user such as delete and dir are interpreted by the DOS which then displays the results of the commands on the monitor.

• The ubiquitous IBM PCs and compatibles use Microsoft DOS (Disk Operating System)

DOT MATRIX (T): A matrix of metal pins which are 'fired' through an inked ribbon thus forming a letter on paper. The amount of pins in the matrix varies depending upon the quality of the printer but is usually in the range 5 x 7 to 24 x 24. Dot matrix machines are cheap and fast, and offer reasonable quality print. See also ***thermal***, ***laser***, ***daisy wheel***.

DOUBLE DRAGON (G): Simultaneous two player coin-op which is easy finished if fed with lots of coins. Converted to the home micro during Christmas '88, the game gleaned indifferent reviews.

DRAGON'S LAIR (G): One of the first coin-ops employing laser disk technology and notable for its graphics, drawn by Don Bloove. Bloove is an ex-Disney animator who used Disney's techniques to create the pictures used in the game. Unfortunately, the game lacks success due to its limited gameplay.

• Dragon's Lair: State of the art graphics but indifferent gameplay

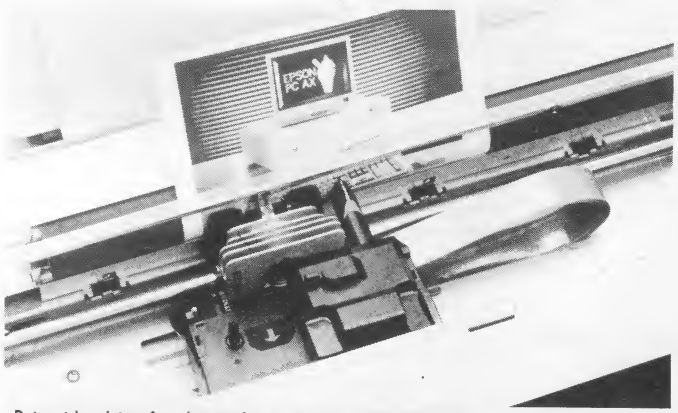
DRAGON (C): Mildly popular 8-bit home computer of the early '80s notable for its use of the 6809 micro processor as its CPU – it was one of only two machines to do so, the other being the Tandy Colour Computer. Although later versions of the machine had 64K memory, disk drives and OS/9 (a Unix lookalike) operating system, the machine slid slowly into oblivion and is rarely seen outside alternative micro shows and small (but dedicated) user group meetings.

DRAM (T): Dynamic Random Access Memory chips are those which the computer must refresh with electrical charges at regular intervals in order to preserve the information stored within. DRAMs are currently rare and expensive due in part to trade sanctions imposed upon Japanese manufacturers by the United States. Contrast with ***static RAM***.

DRILLER (G): Incentive's first use of freescape solid 3D, the game formed the basis of subsequent releases such as *Dark Side* and *Total Eclipse*.

DUNGEON MASTER (G): The best selling game to date for the ST. In many ways regarded as a an epoch-making game in terms of depth of play although some of the locations have been described as being modelled on NCP car parks. Although available for .5Mb machines for the ST, Amiga owners can only play if their machine has 1Mb of memory, causing a lot of irate Amiga owners to complain in the strongest terms.

DUPLEX (T): Pertaining to the methods of communications full and half duplex. Communicating in full duplex mode allows the communicators to transmit information in both directions simultaneously. Half duplex allows transmissions in one direction at a time. See also ***modem***, ***comms***.



• Dot matrix printers form letters via an array of pins 'fired' through an inked ribbon

Key: C - computer Co - company DB - database DTP - desktop publishing G - game GG - game genre Gr - graphics Int - integrated software L - languages P - personalities SS - spreadsheets T - tech spec WP - word processor

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Making a small fortune

The days of the teenage computer programming whizzkid earning £1,000,000 a year are long gone, aren't they? Rik Haynes gets some answers by interviewing twin brothers Ian and Mic – who fit the bill as teenage programming whizzkids, but are still working on the £1,000,000...

Although Ian and Mic Jones come from a humble background – a maze of a council estate in Basildon, Essex – that hasn't stopped these eighteen year old twin brothers from setting up their own software development company *WOW!* (formerly Reptilia Designs). It now boasts an impressive and ever increasing turnover, a new member of staff and several freelance programmers, various projects under development, and a new sideline selling Public Domain software, Wicked PD. A great example of Thatcher's babies taking their own initiative, or kids doing it their own way?

In the beginning

Ian and Mic started programming five years ago on the Commodore Vic-20. They produced several games and routines on the Vic, such as a *Lunar Lander* type game game – but it wasn't until 1985, when they purchased a Commodore C128, that they really caught the programming bug.

Although Ian and Mic tried to learn programming from books at first, they felt these tutorials were too full of jargon – so they taught themselves, giving everything their own name and style. Even today they sometimes have trouble conversing with other programmers on technical matters. They soon enlisted graphical help from an old friend, Rob Whitaker, who has produced graphics for the majority of Ian and Mic's programs.

Once they had grasped the fundamentals, Ian and Mic decided to write demos before embarking on any game projects. They wrote demos for "pure fun, excitement, and to get famous". This they achieved, with their C64 demos becoming famous on the Compunet bulletin board. By the time Ian and Mic wrote their first game, *Radius*, on the C64, they had bought an Amiga and had begun to delve into its inner workings – in turn producing demos for this micro as well.

With the money they received from *Radius*, Ian and Mic left school and started to write games on a full-time basis, setting up an office on an industrial estate catering for youth enterprise. They also began a new sideline in Public Domain, and started taking on staff. All business expansion came under the guidance from their father Bill, who runs the business and PD affairs at the moment.

Ian and Mic want their business to expand, taking on more programmers, until they can back

• Double trouble: Mic on the left, with guess who on the right

Deprogramming the co-processors

● *What do you dislike about the computer games industry?*
Porting ST games over to the Amiga – it makes us sick. There's not enough dedicated Amiga games available to show how good it is. These days you can't write an original game and get famous for it – it's all coin-ops and software companies trying to hide your name.

● *What do you like about the industry?*
We just like writing computer games for a living – it's class.

● *Any predictions for the future of gaming?*
The games industry will merge with the music, movie and arcade coin-op industries, and every game will be a coin-op conversion.

● *What do you think about software piracy?*
There's two sides to it. First, we don't like it because it damages the industry, but if it wasn't there, we don't think the C64 would be as popular as it is.

● *What advice would you give any budding games programmers out there?*
You've got to have willpower. The best software company to sell your first game to is a budget firm. Never write a game and just send it off to any software company, 'cause you could just get conned or just waste your time. We've got conned twice by the same company – we'd like to mention its name but we'd better not. Also, there are a lot of pressures for deadlines and stuff, which you don't realise about when you first start out – it really hits you in the face.

● *How long does it take you to write a game?*
If we're really enthusiastic about writing a game, say for instance a game we've always wanted to write, then we could do it really quickly (two weeks) 'cause we're enjoying it and writing a whole library of ready-made routines makes life easy. But if it's a game we don't really like it usually takes 2-3 months.

● *How much money do you get paid for writing a game?*
For a budget game, £2,000, maybe a bit more. Full price, anything between £4,000 and £10,000. It all depends on how you handle business.

● *What are the hardest parts to write in a game?*
We've nearly written all of the types of games there are, and probably the hardest thing to code is artificial intelligence – but we can do it.

● *How many hours per day do you program?*
We do a 9-5 – if we did more than that we'd go mad. Overtime's sometimes necessary especially if there's a deadline coming up. We don't want software companies getting the wrong idea, do we!

● *What do you do to relax?*
We go out – we never know where beforehand. Like we went out and we saw a police raid yesterday.

● *If you weren't programmers, what do you suppose you'd do?*
We probably be computer junkies.

● *What do you think is the worst feature of the C64?*
We wish it was faster. Commodore's biggest cock-up was releasing the C64 with a tape recorder in this country – it should come with a disk drive.

● *What do you think is the best feature of the C64?*
VIC-II chip. Without this chip the C64 wouldn't still be competing.

● *If you could change three things about the C64, what would you alter?*
We'd change the way the bitmap's laid out, we'd give the C64 bitplanes so the multi-colour mode wasn't twice as blocky, and give it more memory. [Ian] I'd just give it more memory, that's all I need, I don't want to go too far because everyone will say what a div, you can't do that!

● *What about the Amiga – is there anything you don't like about it?*
Porting games over from the ST. The Amiga should have had a built-in MIDI port.

● *And the Amiga's best feature?*
The beautiful copperlist which allows the user to do absolutely anything, and the blitter 'cause it's amazingly fast. Commodore really think about hardware support.

● *If you could change three things about the Amiga, what would you alter?*
We would have liked the Amiga to have built-in 1Mb of RAM, that's the only thing really. [Mic] I want more colours and it to be faster. [Ian] Well I think your dreaming Michael.

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out of the programming side and concentrate on managing the business themselves.

The future looks bright

WOW! is currently going from strength to strength, but the small fortunes being made are fairly small. Ian and Mic's current target is earning £20,000 a year – they're still well short, but they're working on it.

They've several games under development at the moment, and are constantly offered new projects to work on (but any offer will be considered – Ian and Mic). For instance, while exhibiting at a computer show last month, Ian and Mic saw the Bitmap Brothers who asked them if they wanted to write the C64 version of their up and coming biggie, *Xenon II*. In fact, while I visited Ian and Mic, a spokesperson from French software company Ubisoft phoned up and asked them to write the C64 version of *Nighthunter*.

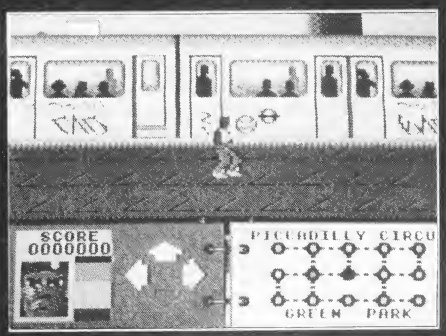
Could it be that Basildon has another talent to sit alongside *Depeche Mode*? After all, Ian and Mic did attend the same school as the Mode lads – and we bet they didn't pay too much attention in class either...

The funniest things

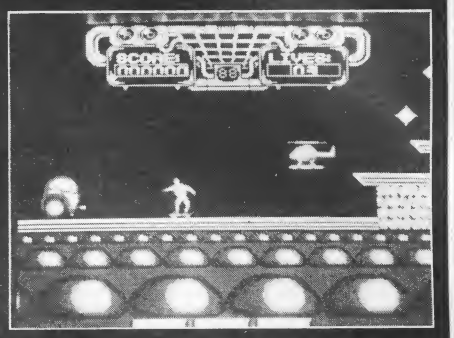
"We went to an all-night party once, and Ian fell asleep and started to sleeptalk 6502 machine code – LDA, STA that sort of stuff."
"We don't like being twins. [Ian] I don't like looking like him, see."
"If you're young, software companies really try to exploit you – but we know who the baddies are now, and we steer clear of them."
"When we were at school we didn't concentrate on anything because programming was on our minds totally – all we wanted to do was get home and write computer games. We know it sounds like a pretty junkie thing to do, but at the time we wondered why we were at school when we were getting money from writing computer games."
"We don't want to spend hundreds of pounds on a PDS system when we're content with the ordinary assemblers we're using at the moment."

Softography

Radius ● C64 ● Players ● Released Early 1987 ● Standard horizontally-scrolling shoot-'em-up.
Scout ● C64 ● Mastertronic ● Released Mid 1987 ● Oddball horizontally-scrolling shoot-'em-up.
Star Ball ● C64 ● Micro Selection ● Released Early 1988 ● Breakout by any other name.
Soldier of Light ● C64 ● Softek ● Released Mid 1988 ● Coin-op conversion of the cult horizontally-scrolling shoot-'em-up from Taito.
Street Cred Boxing ● C64 ● Players Premier ● Just released ● Box-em-to-death-em-'up.
Subway Vigilante ● C64 ● Players Premier ● Just released ● Cashing in on the guardian angels craze – perhaps a tad too late?
Street Cred Football ● C64 ● Players Premier ● Soon to be released
Football Scout ● Amiga ● To be released when a software company buys it! ● Conversion of the C64 game.
Topper ● Amiga ● Arcade adventure being written by new apprentice, Gary Gould.



• C64: Subway Vigilante – available via Players Premier



• Amiga: Scout – available as soon as someone buys it!

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POPULOUS	16.80	16.80
ARCHIPELAGOS	14.30	14.30
LORDS of the RISING SUN	17.20	--.--
WANDERER 3D	--.--	--.--
BLOOD MONEY	14.30	14.30
FUN SCHOOL UNDER 6s	11.50	11.50
FUN SCHOOL 6 to 8s	11.50	11.50
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FALCON	17.20	14.30
F16 COMBAT PILOT	14.30	14.30
STOS	--.--	18.50
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THE REAL GHOSTBUSTERS	12.50	12.50
ZAK MCKRACKEN	15.50	15.50
OPERATION NEPTUNE	14.50	14.50
WAR in MIDDLE EARTH	11.50	11.50
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GAUNTLET II	15.10	--.--
DENARIS	12.95	--.--
CALIFORNIA GAMES	12.50	--.--
BAAL	11.50	11.50
GAMES - WINTER EDITION	--.--	13.20

16 BIT SOFTWARE	AMIGA	ATARI
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3D POOL	11.70	11.70
ALIEN LEGION	14.70	--.--
ALPHA MAX ONE	--.--	9.70
AMIGA GOLD HITS	16.80	--.--
ARCADE FORCE FOUR	--.--	16.80
ACTION SERVICE	11.70	11.70
ACTION ST	--.--	13.90
BATTLECHESS	16.80	--.--
BARBARIAN II	11.70	11.70
BATMAN	14.70	11.70
BATTLETECH	14.70	--.--
BATTLEHAWKS 1942	14.70	14.70
BLASTEROIDS	14.70	11.70
BIO CHALLENGE	14.70	11.70
BOMBUZAL	14.70	14.70
BUTCHER HILL	13.90	13.90
CHAOS STRIKE BACK	--.--	9.70
CAPTAIN BLOOD	14.70	14.70
CAPTAIN FIZZ	9.70	9.70
CRAZY CARS II	14.70	14.70
CUSTODIAN	11.70	11.70
CYBERNOID	11.70	11.70
CYBERNOID II	11.70	11.70
DARK FUSION	13.90	13.90
DREAM ZONE	14.70	14.70
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E. WEAVER BASEBALL	13.90	--.--
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ST

Price busters

US Gold has recently decided to drop the cost of all its arcade game licences to £14.95, but is this the way forward? Most other major software houses are reluctant to follow suit, although several budget labels have suddenly appeared. Rapid Software (Software Horizon's £9.95 label) and Collectable Items (a £4.95 label), for instance.

Of course, there are other labels that have been in existence for some time – some prospering and others not. The future of Virgin Mastertronic's £9.95 label is in some doubt – not regarding its continued existence, but whether the price point will remain the same. According to Virgin's product manager, Andy Wright, sales of £9.95 software have been dodgy. A higher price point might be on the cards. Llamasoft's Jeff Minter, on the other hand, is happy with the way his £9.95 label is ticking along and will doubtless continue doing ST versions of his classic Vic 20 games.

ST games are usually the result of three or four-man teams. It shows; the outcome is usually sonically and graphically pleasing. But then it has to be because 16-bitters expect so much. To reduce the price of games, software houses will have to get better deals from programming teams. The only way that will happen is if there are less people in development teams. This sort of trimming might result in cheaper games, but it's unlikely to do much for the look and feel of the game.

The other side of the coin is that by bring down the price more users will be able to afford games and actually buy them rather than pirating them. Volume sales will mean that software houses will make enough to pay for full development teams. So the theory goes. Lets see what happens.

ST innovation

In *Express* issue 22 I speculated that a competition based around the most innovative use of the ST would be announced a few months prior to the Atari show. Well, it's happened.

In a bizarre link-up, Database Exhibitions and Silica Distribution have put up a total of £6,000 in prizes. There are three fabulous holidays to be won. First prize is £1,500 from SDL in the form of Premiere Cheques (which can be cashed in for a luxury Mediterranean cruise) and the cash equivalent from Database allowing the winner to take another person. Second prize is £1,000 in cheques plus the cash equivalent for a second person. Third Prize is £500 in cheques plus the cash equivalent for another. Sounds confusing – but basically the three winners get prizes allowing them to take themselves and a partner on an exotic holiday.

The competition is to find the most innovative use of the Atari ST – this can be anything from a hardware device that lets you control all the electrics in the house to a program that lets you plan gourmet meals. The winners will be announced at the Atari June show which is to be held at the Alexandra Palace in Wood Green, London from Friday 23rd to Sunday 25th. Tickets (051 3572961) cost £4 for adults and £2.50 for under 16s. Show times are from 10am to 6pm except for Sunday when the show closes at 4pm.

All you need do to enter is write a 500-word description of the innovative way in which you use your ST and send the summary – along with any support material on disk – to **New Computer Express, 4 Queen Street, Bath, BA1 1EJ**. *Express* will pass on the best entries to Database.

Bundle rumble

An *Express* front-page news story a while back carried details of Atari's new 520 bundling promotion. At the time, the exact contents of the pack were unknown. All can now be revealed.

An impressive total of 20 games will be included – *Afterburner, Black Lamp, Bomb Jack, Double Dragon, Eliminator, Gauntlet II, Nebulus, Outrun, Overlander, Pacmania, Predator, R-Type, Super Hang-On, Super Huey, Space Harrier, Starglider, StarGoose, StarRay* and *Xenon*.

Other items in the pack include *Music Maker, First BASIC* and Organiser software. It's undoubtedly a very strong line up. *Music Maker* is something along the same lines as Electronic Arts' *Music Construction Kit* and lets you compose tunes using the internal sound chip as the noise generator. *First BASIC* is a cut-down version of HiSoft's *Power BASIC*.

This is an interesting move on Atari's behalf because it signals a move away from Metacomco's awful BASIC, *ST BASIC*. "We took a lot of stick over *ST BASIC*", admitted Bob Catz at Atari, "which is why we looked at what else was available. HiSoft's BASIC seems to be the ideal choice. Although *First BASIC* will only be available with the bundle at first, there is the possibility that we might switch over completely to HiSoft's BASIC."

The major differences to *Power BASIC* will be lack of compile-to-disk option and cut-down libraries. *First BASIC* will work just like an interpreted language even though it compiles to memory. Virtually all ST BASIC programs should run much faster (and without modification) under *First BASIC*. A coupon will be included with *First BASIC* allowing users to apply for a hefty manual. There will also be a very attractive upgrade option to *Power BASIC* or *HiSoft BASIC*.

Currently only the 520 will be bundled with *First BASIC*; 1040s and Megas will still come with *ST BASIC*. Lets hope Atari drops *S T BASIC* in favour of *First BASIC* – it makes sense.

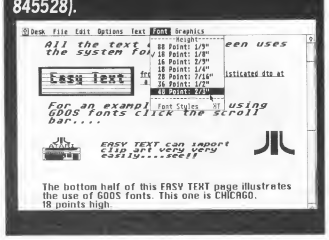
Adrion McHerriot

Budget DTP

The public domain Easy Text DTP software from zzSoft recently landed on my desk – and boy is it good. Easy Text can import all types of First Word documents. Imported text may be left and right justified – and can be displayed in columns. Degas format images can be imported anywhere into the page.

Many different graphic fills are available enabling many different effects to be created. Screen updating is remarkably fast – even when clip art is being displayed. Even printed output to most dot matrix printers is possible. 24-pin and laser printer support is promised in the next update.

For free it is unbeatable. Details from 3, Riverdale House, Mytholm Close, Hebden Bridge, West Yorkshire, HX7 6BP (0422 845528).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PC UPDATE

Switching printers

If you have more than one printer for your PC, you've probably thought about connecting them both (all?) to the machine with a printer switch box. This is simply a multiway mechanical switch which transfers all the input lines to one of the two sets of output lines. It differs from an electronic switch in that the whole thing's mechanical, it contains no kind of printer buffer, and it costs about £80-£100 less.

I recently decided I was fed up with plugging and unplugging laser and dot-matrix printers from my PCs and rang CompuAdd about a mechanical switchbox, a snip at around £13. They'd plenty in stock, but wouldn't recommend then for use with a laser printer. "Why not?" queried I. "Blows up the electronics in the printer," said they. So began a series of phone calls to a number of different suppliers to try an establish the truth. Several said they'd sold hundreds of their mechanical switch boxes and were sure many had been used with lasers to no ill effect.

Others confirmed the CompuAdd story and said that the interfaces on lasers had less buffering than with other printers and there was serious risk of harm to the printer. OK, I thought, I'll ring Hewlett Packard and get a definitive answer. I rang them, and was told to contact the distributor from whom I'd bought the printer, as they were supposed to provide technical support. I did so, and was told there should be no problem with a switch box. However, it's hard to remove a fear once implanted, so I rang HP again. Blustering my way into their corporate support department, I managed to establish that HP itself uses a mechanical switch box for its own laser, apparently without problems. The switch box is its own, however, and costs a cool £326.60!

Will he take the risk? Tune in again same time, same place...

At last, a response

Having prompted readers for several weeks now to write to me, I've had a very interesting letter from John Broad of Oadby in Leicester. He's not just writing to pass the time of day, but to include a disk of clip-art he's translated from Public Domain PCC files into PCX files. This makes the items suitable for use with many DTP systems, including Ventura Publisher, Timeworks DTP and Logi UK's Finesse. There are over 300 separate clips archived onto this disk, ranging over a wide number of topics. They range too in size and to some extent in resolution, but for the most part are quite usable as line art.

Being a magnanimous sort of fellow, John has returned his new disk to the Public Domain, through Softcell in Cardiff. Some of the images have been reproduced on this page – I wonder what Disney might say about the dwarfs.

Sprint finish

Whatever Guy Kewney might say about it, I have a certain liking for Borland's *Sprint* word processor.

Not only is it a pretty effective word processor, but it includes the ability to change about any facet of its operation. You can call in the much publicised macro files to get it to imitate your favourite word processor (or at least your average PC user's favourite word processor – surprisingly it doesn't have a *TopCopy Plus* emulation).

No matter, you can always write one, using the packages built in word processor language. *Sprint* is not the first word processor to introduce this innovation, of course. *Protext* has done it for years on a variety of machines, but Borland has taken the concept a lot further. You can write macros in *Sprint* which Cobol programmers would call verbose.

Sprint uses the idea of style sheets, familiar to DTP users, and applies it to word processing. With *Sprint's* format definitions you can specify font, point size, margins, line spacing, indents and a number of other typographical controls and save them all in a named file. You can then apply that format to any piece of text to force it to take up those characteristics. You can even apply a format which is itself a modification of another format. Here's an example:

```
@Define(Program, font mono, size 8 point,
    spacing 1, justify off,
    fill off, spread 1, notct,
    leadingspaces kept, blanklines kept,
    initialise "@*", beforeExit "@*")
```

This defines the format 'Program' to use an 8 point monospaced font in single spacing, unjustified, with spaces as in the document and with a blank line at the start of the format and when it finishes.

The language is like a cross between a macro facility and the PostScript language and looks interesting if you have the time to study it. The *Sprint* manual is evidence of what can be done if you do.

Seeing the light

I'm a sucker for light bulb jokes and was tickled by this one, again from John Brand. How many Ashton Tate employees does it take to change a lightbulb? Three: one to change the bulb, one to supervise and one to see that the 'look and feel' of changing the bulb does not impinge on any existing work.

New blue printers

IBM has released two new 24-pin dot-matrix printers to add to its Proprinter range. They are each about 20% faster than their predecessors and produce high quality text and graphics. Isn't that what you'd expect from a 24-pin printer?

They're to be manufactured in Italy and come with Centronics parallel interface as standard. The serial interface is an optional extra and prices are £664 for the standard carriage width and £810 for the wide carriage model.

Simon Williams

AMIGA BLIT

What does the future hold?

A lot has happened to the Amiga over the past couple of years. We've seen how a machine that was once regarded as a bit of a dodo has gained enormously in popularity to become one the top selling machines in countries all around the world. Software and hardware support is now assured and the Amiga market is looking healthier than it ever has. But what does the future hold for our machine?

Looking closely at both the Atari ST and the Amiga, the market trend seems very similar to that of the Commodore 64 and Spectrum when they were first released.

When the 64 first say the light of day, the Spectrum already had a firm grip on the home market and software companies were slow to take to Commodore's 8-bit wonder machine. The Amiga was very much in the same position as the 64 in those early days, technologically ahead of its time when compared to the competition, but no takers.

As history shows, the 64 soon took off in a big way as Joe Public came to realise the potential of the machine. To an extent, exactly the same has happened to the Amiga as more and more people realise the machine's obvious potential. I think we can safely say that this trend will continue with the Amiga set to take over the 64's throne as the ultimate home computer.

Whereas the Commodore 64 has remained very much unchanged, the expandability and adaptability of the Amiga hardware will ensure its continuing popularity in the years to come. Some say Unix will be the next big thing, while others argue strongly in favour of transputer based machines. Whatever way the market goes, both Unix and transputers are already a reality on the Amiga.

Games Snippets...

● Cinemaware, producer of such classics as *TV Sports Football* and *Rocket Ranger*, is generally regarded as one of the top producers of software for the Amiga. The good news is that the master of 16-bit games has taken under its wing some home-grown talent. Cinemaware will be handling the Stateside marketing of Incentive's new FreeScape 3D titles *Dark Side* and *Total Eclipse* under the new Spotlight label.

● Oh dear, Activision certainly does seem to be going through bit of a rough time at the moment. After the release of the appalling *Afterburner*, the arrival of *R-Type* seemed to signal good times ahead. But once again, Activision has released another dodo in the shape of *The Real Ghostbusters*. Believe me, this game is *very* bad!

The game plays in a very similar vein to the classic arcade game *Robotron*, but unfortunately the game lacks any of the addictive qualities that made *Robotron* such a cult success. Activision would probably have been better off producing an enhanced version of the original 8-bit *Ghostbusters*.

● I've been lucky enough to get a sneak preview of US Gold's latest arcade conversion, *Forgotten Worlds*, and from what I've seen it looks pretty hot. The only point that I wasn't overly keen on was the rather confusing control method which really does take some getting used to.

Consolation Time

One of the most neglected features available to CLI users is the console device. This can be used in a very similar way to other AmigaDOS devices such as PRT:, to allow you to redirect the output from a program to a completely fresh window therefore avoiding cluttering up your main CLI work window.

For example, what would you do if you wanted a directory listing of a disk that was chock-a-block with files without removing what is already displayed in your CLI window? Simple, just use the console device! The following line would do the job:

DIR > "CON:0/0/640/255/Disk Directory" DF0:

The above command will redirect the output from the AmigaDOS DIR command to a window of dimensions 640 by 255 pixels. The text string Disk Directory is the window title. Once the command has finished, the console window will be closed and control transferred back to your main CLI window.

One thing to note about redirection under AmigaDOS is that the actual redirection has to be the first parameter, with the rest following; entering a line such as DIR DF0: > PRT: will not work. It should in fact be DIR > PRT: DF0:.

Message Port

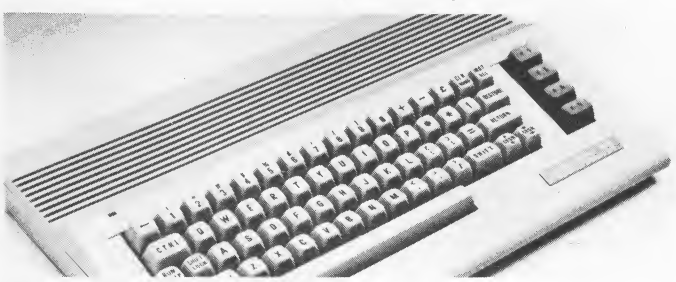
If you have any views on any issues raised within AmigaBLIT or about any aspects of the Amiga industry in general, then I'd love to hear from you. Similarly, if you have any news, tips or tricks that will make the life of an Amiga owner even easier, then why not write in and share them with your fellow Amiga owner. Send your pearls of wisdom (and bribes) to: AMIGA BLIT, NEW COMPUTER EXPRESS, 4 QUEEN STREET, BATH BA1 1EJ.

Argonaut Update

The prize for the best name for a piece of software must undoubtedly go to Argonaut Software. Its assembler development system, as featured in AmigaBLIT #25, has now been named and will be sold under the name of... wait for it... *Argasm* (ARGonaut ASMembler, geddit?).

Contrary to the various rumours that have been floating around, *Argasm* does not need at least 2 Mb of memory and will in fact work fine on a standard, unexpanded Amiga A500. *Argasm*'s main claim to fame is its astonishing rate of assembly; approximately 1 million lines per minute.

Jason Holborn



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Fairies

Game of the week, if my opinion counts for anything, is *Stormlord*. This is yet another well-programmed, addictive and very playable release from old favourites Hewson. The company's back catalogue is positively wall-to-wall with the excellent Spectrum games that it has been releasing since the prehistoric age of computing.

Not that that can excuse it for the plot of *Stormlord*, though. It's frankly vomit-inducing, so if you must read about the Evil Queen and her gay Pixie folk it's best left till after meal times.

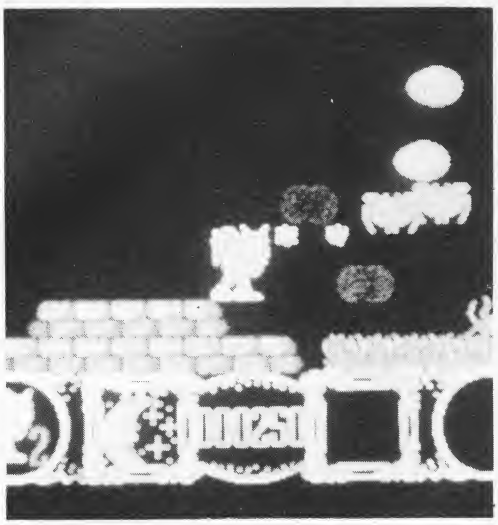
In fact, the whole idea behind the game is surprisingly nice – not a bit like the explosion-filled maim-'em-ups we've come to expect from the author, Rafaelle Cecco. Still, plot aside, I like it. The sprites are big, colour clash free and well-drawn, particularly, it must be said, in the case of several naked female statues. Listen carefully, and you'll almost be able to hear the outraged letters being scribbled out as we speak.

On the whole, I'd recommend it. A tad too cutesy, some might say (you have to catch fairies' tears and things), but worth buying until Hewson wises up and heaves all its past successes onto the cheapie sector.

Mail chauvanism

Letters on any Spectrummy subject receive a hero's welcome at SPEX. Send in your hints, tips and pokes for games and serious uses, your problems concerning games or technical matters, and any fanzine, piece of software or info on a user group which you feel deserves a healthy plug.

I'm also keen to hear from software houses which have got anything deserving of coverage and interesting to that wonderful band of folk, Spectrum owners. Find me c/o New Computer Express, 4 Queen Street, Bath BA1 1EJ. (Incidentally, I recently received a letter from someone having a problem with an interface, looking for a circuit diagram and offering a sports scoring program. Inexplicably, and unforgivably, I've lost it. Please write again!)



Reasons to be cheerful

The world's full of non Spectrum owners whose main mission in life seems to be convincing you how pathetic the Spectrum is and how wonderful things would be if you up (more likely down) grade to their machine.

For such occasions, here are ten impressive put-downs you can bombard them with until, in a state of shock, they retire to a darkened room. Ideally, memorise them, but if you can't manage that, jot them down on postcards and keep them close at hand for when the dreaded computer-bore strikes.

- The Spectrum can lay claim to being the only computer which has a program designed to influence the subconscious mind through subliminal messages. (This technique was the main basis of the plot for the sci-fi film *2 0 Minutes into Future* starring Max Headroom – see issue 26 for details.)
- The Spectrum has been the most popular computer in Britain for at least three years. Current share of the market is an estimated 44 per cent.
- The Spectrum is supported by three specific mags and has coverage regularly in six others.
- Americans don't like the Spectrum.
- The Spanish, Russians, Czechs and Poles do like the Spectrum.
- TV's "Mr Magic" Paul Daniels used to own one.
- There is no record of anyone finding a virus on the Spectrum.
- At least twenty games originally conceived on the "humble" Spectrum have been, or are being, converted for release on 16-bit computers (for example, *Exolon*, *Cybernoid*, *Sabrewulf*, *Knightlore*).
- A rubber-keyed Spectrum was used in a scenery montage on BBC2's *Late Show* as a backdrop to a discussion on the effects of Thatcherite idealism on the arts.
- The Spectrum has never appeared, been referred to in, or connected in any way with any Australian soap opera, ever.

Longer lasting drive

Definitely the market leaders with "Why didn't I think of that?" type ideas, MGT has got a new product of interest to Spectrum owners which isn't the SAM. Despite what you may have read, its Lifetime Drives are fully compatible with the Speccy. These are 3.5" and 5.25" drives which can be used with practically every machine on the market, and thus allow you to keep them when you might be discarding computers left, right and centre to keep up with technology.

For example, say you started off with a C64 and after a week or two discovered it wasn't for you, the only thing that would be made redundant would be the computer. The Lifetime Drive could also be used when you upgraded to a superior micro like the – um – Spectrum, for example. Phone MGT on 0792 791175.

Green around the gills?

Quite an old tech tip, this one, but worthy all the same. If you're experiencing problems with 48K colour, open her up (there can't be any of them still under guarantee, so live dangerously!) and locate two small brown variable resistors, fiddle about with the lower one to change colour to less psychedelic shades.

Robin Alway

SECTOR 64 SECTOR

New releases

Softek has quite a few labels for its products – names such as Ace, The Edge and their budget label Micro Selection. Well, all that's about to change. The Edge is a name well known by the public, and sales suggest that people know what to expect from this label – it does better than the others Softek publish. Joining the list, however, are two new budget labels – Rad1 and Rad2. Rad1 games will go for the normal budget price, while Rad2 games will compete at the new Code Masters price of £2.99. Softek says that Micro Selection will remain on the market, but including only budget titles already published.

Here are some new releases from The Edge, coming soon in the next few months, with thanks to Helen for the PR work.

● Garfield: Winter's Tail – £9.99cs, £14.99dk + free poster

Here's a brief for you. Garfield has fallen asleep in front of a roaring fire, and as he sleeps he dreams of the Alps. Images form in his head, and he is off on a fantastical journey in search of the world's largest pasta factory.

The game begins with a ski simulator with a difference. After skiing down the Alps to the northern Italian side, Garfield will probably find the world's largest lasagne factory waiting for him at the bottom. It features quite a lot of locations where Garfield can scoff himself silly. Just watch out for this one if you're on a diet.

The game also features arcade style action, simulation and puzzle-solving, but before you go out and buy it, just read the reviews.

● And one for all the budding comic fans – The Edge has the licence for the X-Men coming soon on the C64, so keep your eyes peeled for that.

● Do you remember *Darius*, the two-player arcade game with three TV screens? The Edge also has the licence to do an '89 version. With various things changed around here and there (you can't have three screens on your C64, can you?). But I can't wait to see it, just to find out how they've tackled some of the problems involved.

● Raffles – The Edge

This is a 3D isometric arcade adventure in the style of the older Edge titles of Fairlight, and the titles released by Ultimate in the older days. Everyone's first reaction to these games was good. They set a standard very hard to beat in the industry, but sadly these games are not as wonderful as they once seemed, as computers now achieve higher standards in other fields – e.g. solid shoot-'em-ups, beat-'em-ups etc. People are now looking to see what resemblance a game has to their favourite arcade offerings, which is sad really because it means less credit for the programmers and games with no imagination.

Cheats

If you have any cheats you would like to see printed here, then why not send them in. Thanks to Gazza Gould once again for this little one:

In *Fernandes Must Die*, to get lots of Rambos just pause the game and type SPINYNORMAN.

Ian + Mic

Strobe light listing

Anyone can boogie now to their favourite music with their own disco light show, thanks to this tiny listing. Come on, there's no excuse – anyone can type this one in. If you've been to a disco then you will be very familiar with the strobe light, but if not I shall explain. A flashing light in a dark room will make your eyes 'miss pictures'. For example, if you threw an object in the air (i.e. a Speccy), then as it span around you would only see two sides instead of 30. Anyway, have fun, and just follow the guide below to get more out of the routine.

```
0   REM LISTING BY IAN + MIC
1   B=49152:FORL=0TO90:READA:POKEB+L,A:NEXTL
10  DATA 120,169,192,141,21
20  DATA 3,169,15,141,20
30  DATA 3,88,96,96,96
40  DATA 169,26,173,16,192
50  DATA 201,32,208,34,169
60  DATA 0,141,16,192,165
70  DATA 254,141,21,192,162
80  DATA 0,189,89,192,141
90  DATA 32,208,141,33,208
100 DATA 238,35,192,232,224
110 DATA 2,208,5,169,0
120 DATA 141,35,192,238,16
130 DATA 192,169,27,141,17
140 DATA 208,169,1,141,25
150 DATA 208,169,127,141,13
160 DATA 220,169,129,141,26
170 DATA 208,169,0,141,18
180 DATA 208,76,49,234,11
190 DATA 12
200 POKE254,2          :REM *FLASHING SPEED
201 REM SPEEDS RANGE FROM 0-255
210 POKE49241,01       :REM *FLASH COLOUR 1
211 REM WHITE
220 POKE49242,00       :REM *FLASH COLOUR 2
221 REM BLACK
230 SYS49152           :REM *START STROBING
240 PRINTCHR$(147)     :REM *CLEAR SCREEN
250 GETA$:IFA$=""THEN250
```

You can change strobing colours by changing locations 49152 onwards. Also, if you change location 254 from a range of 0-255 it will change the speed of the strobe to give an even weirder effect. The program is at the moment fixed to strobe between only two colours, sof if you would like the code to strobe about eight colours, then type POKE 49202,8. Now you have locations 49241, 49242, 49243, 49244, 49245, 49246, 49247 and 49248 spare.

Remember, if you would like to include this in your own programs, then just continue from lines 250 onwards.

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0. Connect Z88 and PCW via the RS232 and cable. Save Z88 file in plain text format
1. Run up CP/M
2. At the A> type SETSIO XON ON[RETURN] (You must have SETSIO.COM on the disc – if not use a *DISCKIT*ted copy of the master disc or copy SETSIO.COM onto this disc using PIP)
3. Type PIP[RETURN] (Ditto for PIP.COM). At the asterisk insert the disc to take the new file
4. Type CHAPTER.1 =AUX: (or other name)– nothing will appear to happen
5. On the Z88 type [SQUARE]X and then S to send a file. Give filename eg. :RAM.2/CHAPTER.1[ENTER]. Z88 'counts' the blocks of text transferred; nothing on PCW yet.
6. [SQUARE]V on Z88 ('terminal' mode) then [DIAMOND]Z ('I've finished'). The disc light goes on, the drive whirrs; asterisk reappears on PCW
7. Repeat from 4 with new name if you want to transfer more files. End with [RETURN] on PCW

To insert the resulting file CHAPTER.1 on the PCW in *LocoScript*, create a new document on the same disc as CHAPTER.1. In new document 'insert text' ([f1] *Loco 2*, [f7] *Loco 1*); on disc manager select CHAPTER.1 then [ENTER].

Replace all occurrences of 'BA3' by a £ sign using [EXCH] and all (space)(return)s by (space). Select 'automatic' for both. Remove garbage at beginning and end.

Hard disks

A typical letter takes up 1-2K, a paperback novel around 500-600K. If you want to write a real epic, you're in for a lot of disc swapping. Why not get a hard disk? Instant access, as fast as your memory, and 40Mb (40000K) of space to keep your programs and data files.

Ideal Hardware has secured rights to distribute a new 40Mb hard disk for the PCW, bringing the number available to two. Called Vortex System 2000, it costs £499 including all cables and formatting software. An add-on for £199 lets you use the same disc on any one other machine (but not at the same time). Details on 01 390 1211.

Basil Pigg

Footnote note

There's no easy way to make footnotes in LocoScript or Protext; the best thing to do is put the footnote text immediately below the reference and move it to the bottom of the page before printing. Start it with a blank line and then (+UL)(+RA)(-UL) in Loco 2 or [ALT]XU[ALT]@R[ALT]XU in Protext – this rules a line across the page to separate your footnote from the main text. Footnote text 17 pitch.

QL corner

Thor International

After all the trials and tribulations last autumn, Thor International (formerly CST) is alive and well in Copenhagen, Denmark, according to Helmuth Stuven of Dansoft. Manufacture of the QL-compatible Thor 16 machine has been sub-contracted to Bruel and Kjaer (its main business is very high-quality acoustic test equipment), and an initial batch of systems has been delivered.

The much-hyped project to sell Thors to the Soviet Union is still on the boil, with Stuven visiting the USSR for discussions at the end of April.

The biggest QL network?

Leon Jaeggi, of Leon Jaeggi and Sons Ltd, suppliers of catering equipment, has installed what is probably the biggest network of QLs anywhere at its factory. A total of 15 networked QLs are used for order processing. Four of the QLs, fitted with CST hard drives, are used as file servers. Their two shops will shortly have five QLs each – three connected to tills, with two hard disk file servers. All software is written in QLiberated *SuperBASIC*, by Leon.

If any readers know of a bigger system, please let me know.

QL Service Manual

If you are reasonably knowledgeable about electronics, the *QL Service Manual* is a mine of information about the QL, mainly from a hardware point of view.

My copy is dated October 1985 and, interestingly, was written by Thorn (EMI) Datatech Ltd, which manufactured the QL, rather than Sinclair Research Ltd. A list of bugs is included, and I'll be publishing some of these from time to time. Here are just a couple:

Video digitiser

A reader recently asked if anyone knew of a video digitiser for the QL.

S.P.E.M., Via Aosta, 10154 Torino, Italy, can supply a digitiser for approximately £125.

It is interfaced via the ROM cartridge port. Quanta has one of these which members can borrow, and it works quite well. It can take input from any video source, and has three slider controls allowing experimentation with different colour levels.

- If you delete a procedure at the end of a program, and then call the procedure by typing in its name, and then type "CLEAR", the QL may crash. If you haven't save the program you are working on and fall foul of this bug you could end up having to type the whole program in again. You do save your programs regularly, don't you?
- If you use "LIST" within a program (I don't know anyone who would want to), funny things can happen, such as the various "unfortunate states".

John Torofex

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Acorn's backup

Oh dear!, oh dear, it's a tragedy (and other cliches). "But what on earth is he moaning about this time?" you are probably saying to yourselves. The answer is contained in one word: Acorn.

Everybody's favourite computer manufacturer has been shooting itself in the foot again. It seems that their idea of customer service is a rather frosty young lady telling everybody about 'Company policy.' It appears that 'Company Policy' dictates no telephone support, and requests for help should either be sent in writing, or directed to the nearest dealer.

I do understand the pressures under which a company operates. Surely, however, Acorn can tell the difference between a customer who hasn't read the manual, and someone genuinely needing to talk over a serious problem. The fact that similar treatment was meted out to the very well respected editor of a dedicated Acorn magazine is a cause for some concern. Let's face it, without the support of the press there would be no Acorn today. So, please let's have some sympathetic treatment, and remember those profit margins!

Read all about it

Watching Fahrenheit 451 on the TV last night reminded me just how heavily dependent on books we are, particularly reference books. So this week I am going to recommend a book called The Master 512 User Guide from DABS press. Essential reading for all '512 owners, the book really gets down to it and explains what the manual leaves out, in plain English to boot. There are useful chapters on all those cryptic DOS commands, plus sections on batch processing, and even possible hardware expansion. Most useful of all to 512ers struggling with software is the section explaining what software does, and what does not work in the 512 environment, together with a comprehensive list of compatible, and incompatible software.

Modem talk

Hi-Tec Supplies are the people in charge of marketing modems for Modem Marketing. Confused? In fact, the latter company is really the manufacturer, and its latest offering is called the EC2400. This quad speed modem sports all the latest features, 2,400 baud operation, Hayes compatibility, and MNP level five error correction.

Don't panic if you don't understand a word. It all means that this modem has its own on-board micro-processor as opposed to the dumb modems previously produced by this company. No mention of software came with the press release. I assume this will follow in due course. The modem is not, however, approved by BT at the moment, and so price is pegged at £279. I did have to laugh when I read the following: "housed in a black custom ABS case". Looks just the same as all the others to me lads!

Andrew Brown

MSXTRA

Grand news

I've good news following a recent chat with Grandslam Entertainment Ltd. We can expect most of Grandslam's full-price titles to be converted to the MSX, though not its latest, *Running Man*. This means that *Thunderbird s* will be the next release.

Oops!

Last week's story about the new MSX retailer taking orders for MSX2s and offering other MSX goodies had the wrong 'phone number. Call David Webb on 0775 711108.

I also asked how well MSX games were selling in the UK and Europe. The reply was that although sales in the UK were nothing to write home about, sales in Europe were excellent, with the MSX being one of the most popular formats. This should mean that we can expect continued support.

Ad hoc

I'm still receiving requests for names of companies which can supply MSX software – surprising when you consider the number of companies already mentioned in this column. It also proves to me that many people do not read the ads in *Express*, because if you did you would see companies such as Samdale Computers advertising MSX software. I've purchased software from this company, and I can certainly recommend it on the basis of prompt delivery. Titles requested were sent by return of post, and at discount prices too. Phone 0621 742617, and Samdale will send a list of titles for the MSX computer.

Letters begin

I've been inundated with letters from MSXers all requesting information on the MSX. Time permitting, I'll answer as many letters as I can in this column – hopefully all letters will receive a reply eventually.

N Toyne, from Winterton, S Humberside, asks if *R-Type* or *Nemesis* are to be released in the UK, as he has found out that both titles are available for the MSX 1 in Japan. *R-Type*, does not seem to be available in the UK at present, even though it has appeared on other formats. The good news is *Nemesis 3* is now available from all MSX stockists. Mr Toyne also asks if he can purchase the MSX 1 to 2 upgrade cartridge in the UK, or if disk drives are still available for his HX/10 computer. Sorry to say, Mr Toyne, even if the upgrade cartridges were available I couldn't really recommend them – they were very expensive when you consider that to use them properly, a 4-slot expander is needed, making the system more expensive than an MSX 2.

Short of buying a disk drive second-hand, I don't think I can help. Readers withs an MSX drive for sale, please write to *MSXtra*.

I have heard a rumour that we may see some interfaces made available that will allow the use of any "shugart" drive on the MSX. They would be bound to sell well, as MSX disk drives are in great demand.

Keith Neal

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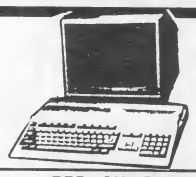

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CPC centre

New modem – worth the risk?

If comms is your thing you may be more than a little interested to hear of a new quad-speed modem retailing for £279. "It's half the price of the modem with the nearest equivalent specification," Hi-Tec boss Martin Paine told me, before launching into the kind of techno-babble that leaves most CPC'ers as wise as they were before he started.

Apparently it has MNP level 4 error correction or, alternatively, MNP level 5 data compression approaching nearly 4,800 bps; autodial with automatic selection of pulse or tone; autobaud, autoparity for the computer interface; autoline clearling if no carrier present; 77 character command buffer and a built in power supply. So that's alright then.

What's not quite alright is that the modem lacks BABT approval – without which it's not legal to use. "Naturally we've applied for BABT approval," Paine said: "but people should be warned that the price is going to rise quite sharply when it gets it."

People should also be warned that BABT approval is not retroactive. On the other hand, I don't know of anyone who's been sent to prison for using a non-approved modem.

Craving a diskdrive?

Phil Craven, the well known CPC hack and raconteur who is entirely unrelated to the chap in the bright jumper who used to do Newsround, has just started flogging a £90 Teac 3.5 inch, 80 track double sided, 1Mb unformatted diskdrive.

It formats to 800K, is one inch high, comes supplied cased with all necessary cables and power supply and is ready to plug in & use. It just needs Rodos or Romdos/Ramdos. Call 0274 636652 and utter the magic password, 'Superphil.'

Micro prose

As a confirmed *Gunship* addict – though by no means an expert, except at potato peeling – I've been reading avidly Richard G. Sheffield's *Gunship Academy: Tactics and Maneuvers for Attack Helicopter Simulations*. Good spellers among you will have surmised already that this must be an American publication, but despite the transatlantic tone it's well worth reading.

There's plenty of info about the real life AH-64A Apache, and plenty of tips and info about how to get the most out of the simulation. It's not specifically aimed at the CPC, of course (there are three CPCs in the States: two 464s in The Big Apple and a 6128 in The Huge Cucumber), and if you're at all queasy about US gung-ho-ness it's not for you. But given that most of us have a rather keener awareness of the distinction between the simulation and the real thing than Mr Sheffield it's probably not too dangerous.

Unfortunately, because it's imported from the States the book does cost £14. Compute in Brum have copies (phone 01 706 6000), and Foyles in London did have until I bought their last one. Any other sources I should know about?

Giving Barbarian a poke

Bill Barrett of West Bromwich wrote to ask whether I could help him finish Palace's *Barbarian*. "I know the sequel has been out for some time," he writes: "and if it's as good as you said it was I look forward to it. But I'm still stuck on the original! Any playing tips and so on?"

I'm afraid not, Bill. But here's a useful disk poke from Julian Page of Shrewsbury that may give you the edge. It allows you to choose how many hits your opponent takes before he dies.

```
1 'Barbarian - disk
2 'by Julian Page
3 'NCE May 1989
10 DATA 21,00,40,11,40,00
20 DATA 01,d8,00,ed,b0,21
30 DATA 14,be,22,16,01,c3
40 DATA 4b,00,af,01,7e,fa
50 DATA ed,79,3e,01,32,46
60 DATA 6d,c3,f2,6a,JPS
70 MODE 1:LOCATE 10,9
80 PRINT"Which side (1 or 2)
90 a$=INKEY$
100 IF NOT (a$="1" OR a$="2") THEN 90
110 LOCATE 10,9
120 PRINT"Which game (A or B)"
130 b$=UPPER$(INKEY$)
140 IF NOT (b$="A" OR b$="B") THEN 130
150 LOCATE 2,9
160 INPUT "How many hits to kill enemy (1-12);h
170 IF h<1 OR h>12 the 140
180 n$="BARB"+a$+b$+".BIN"
190 x=&BE00:MEMORY &3FFF
200 READ z$:IF z$="JPS" THEN GOTO 230
210 a=VAL("&"+z$):POKE x,a
220 ck=ck+a:x=x+1:GOTO 200
230 IF chk<>&C33 the 260
240 CLS:LOCATE 4,9
250 PRINT"Insert disk side ";a$;" and press any key"
260 CALL &BB18
270 LOAD n$,&4000
280 POKE &BE1B,h
290 CALL &BE00
300 LOCATE 4,9
310 PRINT"Data Error"
```

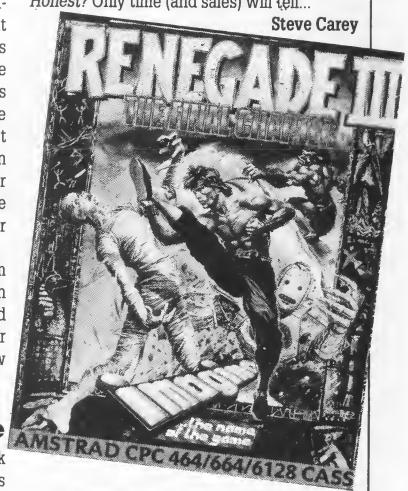
End of the road for Renegade?

That Mr Big is a bad 'un and no mistake. Twice Ocean's heroic Renegade has taken on the fat baddie, yet he still comes back for more. Now, apparently, it's the final showdown, as the good guy gets to kick and punch his way past junior villains and takes on the numero uno for the third and last time.

Both previous games have been excellently programmed kick-'n'-punchers, and what I've seen of this latest appears to be of similar quality. Whether there's enough new about it to make it worth shelling out yet again I'm not sure.

But is Ocean really ready to knock a winning formula on the head? Five years from now will I be sitting here telling you about *Renegade 27 – The Absolutely Last One, Honest?* Only time (and sales) will tell...

Steve Carey



• Last duel for Renegade?

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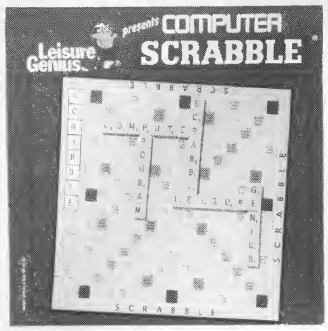
HELP!
Mot Juste



• Scrabble on the Thompson T80D? Never heard of it...

A friend of mine has sent me a copy of your magazine *New Computer Express* with the suggestion that I write to you in the hope that you can help me.

I own a French made Thompson T08D (*What that? – Tech Ed*) computer using 3.5 inch and would very much like to obtain the English version of the game *Scrabble* by Leisure Genius.

I should therefore be most grateful if you could supply the address of this firm.

M Darribehaude, Caudry, France

TIP OF THE WEEK

I had a call from a very informative young man by the name of John Hudson from Carlisle who gave me relevant information for Norm Tierney's little problem with his Philips E1201. Norm had problems with brilliance of picture, break-up of picture and getting the automatic computer sensing to work. Master Hudson says: "Locate the first button of the fifth row of buttons on the remote control handset. After pressing that, an E will appear on the screen. Press the number 2 et voila! Auto sensing..."

My thanks to John for calling – but please can we have your address! The same goes for any other Good Samaritans out there with answers to other readers' problems.

● *John wins a free piece of software for his machine – just as soon as he lets us know his address...*

TIP
No. answer

In response to the letter from E Davis for any info on Dacom Systems I managed to find a 'phone number for Dacom. The number is 0908 311885.

Peter J. Cumberland, Surrey

HELP!
Emigrating Amiga

I have an Amiga 500 with all the trimmings: second drive, RAM expansion and lots of disks. I'm emigrating to Canada in the near future. Could you tell me if any of my system will work over there, i.e. software, or even the computer itself? I realise that I might have to buy a new power supply as it's different voltage over there.

A tip for *Populous* from Electronic Arts. If you get stuck on a level and it seems impossible go back to the last level you were on, then finish it again with a different score and you'll bypass the level you found impossible.

Ian Robertson, Glasgow

• As you said, you will need to change the power supply for one rated at 110 volts. You will also need to take some form of display with you or have the modulator changed. Other than that, all should be well. Have you thought about selling your machine and peripherals and buying a Canadian machine upon you arrival?

TIP
Model Citizen

Regarding the advice you gave a couple of weeks or so ago, in which you reccomend a would-be Z80 programmer to buy the book by 'Rodney' Zaks. First, as 50 other letter-writers have probably pointed out by now (*None, actually – Tech Ed*) the author's name is RodnAy Zaks, secondly, most Z80 programmers who know of both the major works on this subject prefer *Z80 Assembly Langauage Programming* by Lance A. Leventhal published by Osborne McGraw Hill.

I have also two tips for Citizen 120D owners. Firstly, the lighter of its two grey tones (CHR$ 139 in Epson mode) is light enough to run behind NLQ text without making it illegible. Secondly, dropped capitals can be achieved, it's a bit fiddly but worth it. First, print the main part of the text without the capital but with two leading spaces. End this with CR but not LF. Then send ESC J CHR$9 to advance the paper 1/4 line. Then ESC W 1 WSC h and the capital. Finally, to complete the first line of the paragraph, CR ESC J CHR$27 to advance the remaining 3/4 line.

To avoid an unsightly gap in the paragraph, the remaining lines must be printed terminating in CR ESC JS. Don't forget to start the second line with two spaces to clear the dropped capital. Terminate the last line of the paragraph and all subsequent lines with CR and LF as usual and the double height line feed that would normally separate the line containg a double height character from a normal line, will instead give a blank line between paragraphs.

Robert J. Baker, London

• I spent Christmas in Paris and everyone was so nice that just for you an answer is winging its way via English and French postal services at this very moment. Leisure Genius are available on 01-727 8070 if you're in the UK.

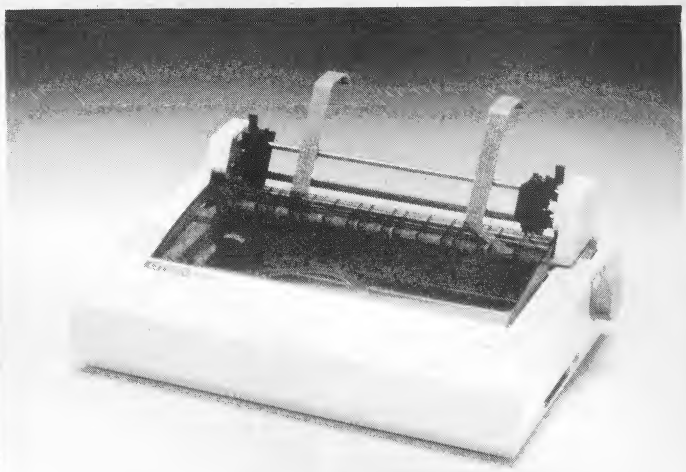
but so far it's a great magazine. Your A-Z guide is an excellent idea for us beginners. Keep up the good work.

Tony Cox, Westfield, Sheffield

• Games software is almost always protected. The programmers have built mechanisms via lines of code into the game to stop people making copies and giving them to their friends. By trying to copy these games you have probably corrupted some of them.

Books? *Beginners Guide to the Amiga* by Dan McNeill is an excellent introduction to the machine, as is *1001 Things to do with the Amiga* by Sawusch and Prochnow. Both books should be available at your local large bookstore.

As for military games, it's always difficult to recommend games because the old adage 'one person's meat is another's lentil cutlet etc.' always rings true. My choices from those you supplied would be *Silent Service* and *Sub Battle Simulator*.



• Trouble with dropped caps on your Citizen 120D? See Model Citizen

HELP!
Sub standards

I've recently become the owner of an Amiga and I need help. I don't know much of computers but I wish to learn. I can't seem to make back-up copies of my games disks. (*...followed by a question wondering why they're now corrupted – Tech Ed*).

Could you also suggest some books which could help my learning process?

I would also like to buy a submarine/military software game, could you recommend two from the following: *Destroyer*, *Silent Service*, *Hunt for Red October* and *Sub Battle Simulator* with respect to realism, levels of difficulty, lasting appeal etc. I don't have many copies of *Express*,

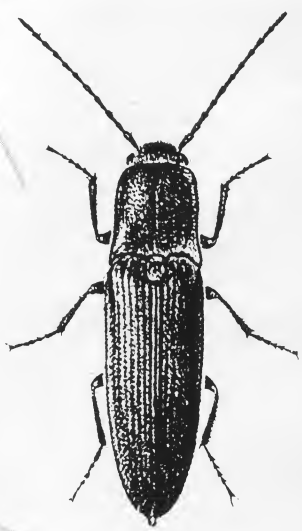
TIP
Sord off: sudden

Re. the letter from A. Thompson of York. I

BUG OF THE WEEK

Protext is a really nice program on the PCW, but for one little problem. There's no way of converting your Protext file into an ASCII version – awkward if you want to import your *Protext* file into *Locoscript* for a final printout. The closest you can get to an ASCII file is to set up your *Protext* file with an enormously long ruler line, so as to avoid 'hard returns' being incorporated inside paragraphs. The trouble is, with lines longer than a thousand or so characters you'll crash the program.

Ronald Ball, Hartlepool



• Synaptus filiformis

The only species of Synaptis found in Europe, it occurs chiefly on living room carpets and behind RAM boards. Extremely shy, it feeds chiefly on off-screen text and seldom-used machine code

expect by now you have been deluged by offers to sell Sord M5s (*None, actually – Tech Ed*) to Mr. Thompson, but here's another.

My offer includes *BASIC G* and *Falc* (spreadsheet) cartridges and manuals as well as an integer BASIC cartridge and the original packaging. I will also enclose a pile of reprints and leaflets which may be useful together with some tape software and utilities. The original cassette player/recorder will also be included as well as a system ROM disassembly. Upon receipt of his cheque for £50 I will send it parcel post and insured.

A Smith, 5 Harebell Close, Highwoods, Colchester, Essex CO4 4RX

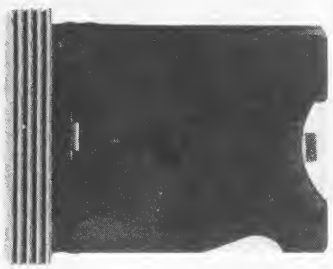
HELP!
What drive?

I recently bought a Sinclair microdrive for my 48K Speccy. Don't worry, I got it cheap.

Unfortunately it doesn't work. When trying to issue commands it simply puts a question mark after them as if the syntax is wrong. I have checked everything, from the couplings to the commands and can find nothing wrong. I thought it might be the ROM or shadow ROM but have no way of finding out. Any ideas?

Simon Daniels, Northants

• It would appear that the Spectrum does not recognise the microdrive, so when you issue commands the machine is completely baffled. Take the microdrive back from whence it came and demand your cash.



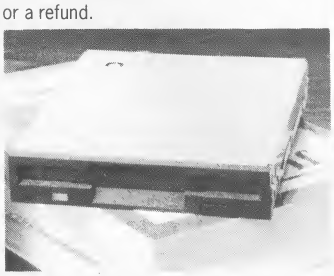
• Spectrum microdrives: Cheap – and nasty too?

HELP!
Half a drive

I brought a 5.25 inch disk drive for my Amiga what I want to know how I can load software from the drive to the Amiga. I can save stuff to the drive but I can't load it back into the computer. So could you or anyone reading this please help?

Simon Keith Hobbs, (no address supplied)

• Help? How can I, when you haven't supplied any details of the drive, from where you purchased it or how you have connected it to the Amiga. I suggest you return it to the supplier describing the problems and ask for a drive that works or a refund.



• Before buying a drive, make sure you see it working with your machine

HELP!
C64 reset

As a 72 year old enthusiast and having progressed from a Vic 20 and Plus 4 to a C64, I would like you to answer two queries for me.

1. How do you reset the C64 after loading a game so as to gain extra lives etc?

2. Where can one purchase games on cartridge for example *International Soccer*.

Having purchased every copy of your magazine, I must end with one word: fantastic!

No name supplied, Knaresborough, Yorkshire

• Resetting the C64 is a simple matter of buying a reset cartridge from Datel which allows you reset the machine. Call Datel 0782 744707. Obtaining cartridge-based is quite difficult, but call one of the bargain-basement suppliers advertised in the back of this and other magazines.

• A Datel reset cartridge will enable you to reset your Commodore 64

HELP!
All talking at once

I am the owner of a humble Spectrum +3, and I also have a Yamaha PSS480 keyboard. Using the PLAY command in a BASIC program, I have managed to play the keyboard on several MIDI channels, but they all play with the same voice! The Spectrum manual says that I should consult my synth handbook to find out how to allocate MIDI channels to different voices, but if the handbook does state how to do this, I cannot find it in there. Can you tell me how to do it or alternatively advise me where I can find out, please.

K J Laken, Harwich, Essex

• Anyone knowing anything of the Yamaha keyboard can call their favourite Uncle on 0225 446034 and I'll happily pass on the information.

HELP!
ST viruses

I have decided to write to you in the hope of saving much worrying over my Atari STFM.

1. How many ST viruses are there and what can they do? (please don't recommend a book).

2. Can the ST disk drive be worn out by over use? Also does some disk protection systems damage the disk drive?

Please print this letter as many people will find this of great interest.

Raymond Ko, West Sussex

• 1. Not a book, a magazine. *Express* issue 19 has all the guff on viruses, available for the extortionate, sorry, very reasonable price of 75p inc. p&p from **The Old Barn, Somerton, Somerset TA11 7PY**. And this is positively the last mention for the virus – I hope (it was over-hyped to start with).

2. Prepare yourself Ray. I'm afraid that everything grows old and eventually dies and so it is with your ST's drive. After many years sterling service it will shuffle off this mortal coil, but if you've only had it for a year or two – don't worry, there's plenty of life in the old dog yet. Although rumours of protection methods ruining drives abound, I've yet to see it, so don't worry.

• Is your ST a target for viruses?

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So whether it's help offered or needed, write to: Tech Tips, New Computer Express, 4 Queen Street, Bath, Avon BA1 1EJ.

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Purple Reign

Rik Haynes risks using another Prince song title as a headline

PURPLE SATURN DAY
INFOGRAMES

After a rapturous reception on the ST and Amiga last year (ST review in *Express* 4), *Purple Saturn Day* is shortly to make an appearance on the Spectrum, C64 and CPC later this month. The game is split into four sub-games: Ring-Pursuit, Tronic-Slider, Brain Bowler and Time-Jump – all containing the hallmarks of French design in art and gameplay techniques

HIGH STEEL
SCREEN 7

With a current release date towards the end of July on Spectrum, C64, CPC, ST, Amiga and PC, *High Steel* is an arcade puzzle/platform game seeing you as a steel framework construction worker having to contend with the likes of Spitters, Crawlers and Gremlins as you strive to build that skyscraper before your contract expires.

CURSE OF THE AZURE BONDS
SSI/US GOLD

Another in the series of role-playing games based on the popular *Advanced Dungeons and Dragons* board games, *Curse of the Azure Bonds* forms Volume II of SSI's *Forgotten Realms* saga. Using an enhanced version of the gaming system found in *Pool of Radiance*, *COTAB* allows usage of *POR* and *Hillsfar* characters. Available soon on C64, with ST, Amiga and PC versions to follow later in the year.

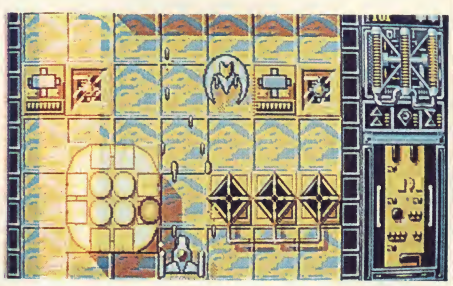
SHALL SERVE EACH OF US IN TURN
WIZARD IN RED, THE WOMAN IN GRE
THE LORD OF BLACK. FINALLY, YO
LS QUENCHED, YOU SHALL BE PAWNS
FLAMED ONE."
SS <RETURN> TO CONTINUE.

JAWS SCREEN 7

Not in any way connected with *Network 7* or *7-Sport*, Screen 7 is a new software label with four titles scheduled for release before September. First title due out is *Jaws*, the computer version of the cult Spielberg horror movie from the 1970's, with you pitted against the Great White Shark. Out soon on Spectrum, C64, CPC, ST, Amiga and PC.

TRITON III RAPID

Rapid Software is a new 16-bit budget label from Software Horizons, which is set to release five new titles over the coming weeks. *Triton III* is a six stage vertically-scrolling shoot-'em-up for the ST and Amiga, with you up against a myriad of alien craft before confronting a giant spaceship at the end of the game.



NAVY MOVES
DINAMIC/ELECTRONIC ARTS

Navy Moves is the sequel to the 1987 game *Army Moves*, featuring two separate sections and four different combat areas, with you placed in control of a saboteur out to destroy the enemy's U-5544 nuclear submarine.To be released shortly on Spectrum, C64, CPC, ST and Amiga, *Navy Moves* is being written by Spanish software company, Dinamic.

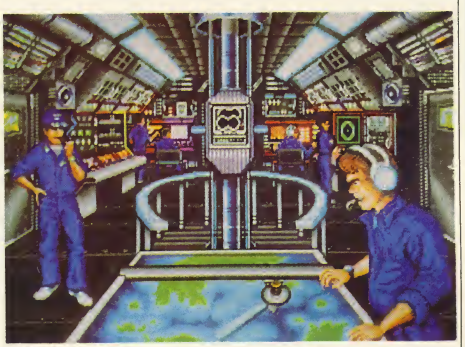
● Whichever way you pronounce it, *Archipelagos* is a front runner for best game released so far this year – check it out.

Mellish was remined of his mis-pent youth – watching Gerry Atric productions – when playing *688 Attack Sub*. *Voyager* prompted Andy Storer to recount his illicit trips to motorway cafes. Football crazy fanatics may find end of season solace with *Microprose Soccer*, but everybody should forget *Mike Read's Pop Quiz*. We did!

688 ATTACK SUB

ELECTRONIC ARTS

PC • £24.99dk
No other versions planned



• On the bridge with the crew members at your command

Dive, dive, dive – yes, I've visited hundreds of them too but not in the confines of an under-water iron lung. For those with a taste for the murky depths – the sea, dear – comes *688 Attack Sub*. Admiral Mellish hoists his periscope and lets fly with a torpedo or two.

● **GAMEPLAY**

First get into the radio room and get your orders. Entering a code into the on-board computer encourages the powers that be to transmit them to the sub's teleprinter and from there you can progress through the rest of the game. You choose either an American Los Angeles class attack sub or a Soviet Alpha sub – the baddies and goodies depending upon your political persuasion – then it's all-out attacking hither and thither with your periscope permanently erect and your torpedo tube glowing white hot.

The object of the game? Put Soviets and Americans together in the sea, each in control of an armed and deadly submarine and let nature (...and spite, petty squabbling and jingoism) run its course – i.e. you kill whatever you can find.

● **GRAPHICS AND SOUND**

The graphics are wonderful. The game supports VGA on PCs and provides the best of any game display yet seen on a PC. Lots of digitised pictures of crew members, and the view through the periscope has to be seen to be believed. Sound? Like all PC games, sound is minimal and of poor quality, but *Attack Sub* tries valiantly to provide you with suitable watery warblings.

● **OTHER VERSIONS**

No other versions planned or available.

● **EXPRESS VERDICT**

The next best thing to salt in your hair and sea-water in your plimsolls – give your rum ration for it.

✪ ✪ ✪ ✪ **Fielding 'Troy' Mellish**

VOYAGER

OCEAN

ST £19.99dk
Also on Amiga

Nice to see Ocean in the biz of producing something other than a licence tie-in or coin-op conversion at last, and pitching firmly into solid shoot-'em-up territory. Just goes to prove it's never too late to climb on a bandwagon.

● **GAMEPLAY**

You're in control of the tank-skimmer, Voyager, and out to conquer the ten moons of Saturn by taking out over eighty types of enemy ships. You have A-bombs and lasers to help you, along with limited fire remote cameras you can drop and view proceedings from. Clearing a moon of opponents involves checking radar for enemies whilst calling up data screens for the location of power and arms supplies.

When the sheer number of enemy craft gets too much you'll need to use decoys to help destroy the 80 hostiles on each moon. Once done, you have a limited time to find a portal to the next moon and a new batch of opponents.

● **GRAPHICS AND SOUND**

Voyager's solid 3D visuals are competent enough – once you're airborne, the terrain moves smoothly – though in tank mode control's a little stiff. Landscapes are a bit sparse, but made up for by some of the imaginative enemy craft designs. Switchable multi-viewpoints work well too, as do the slo-mo explosions of disintegrating ships. Sound is confined to the usual spot-effects of laser fire etc.

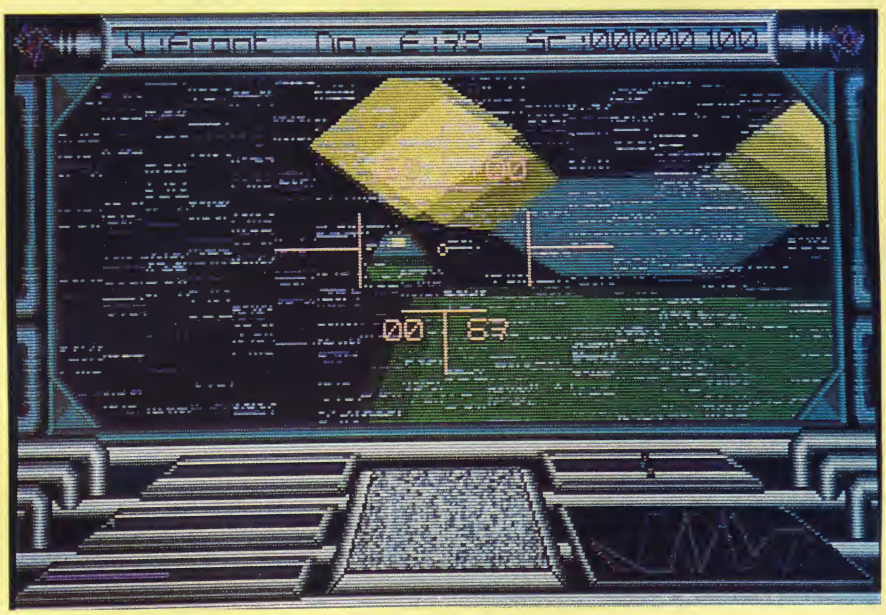
● **OTHER VERSIONS**

Only the Amiga version is completed as yet, which is still unseen.

● **EXPRESS VERDICT**

With more than a passing resemblance to the *Battle Zone* coin-ops littering every motorway services in the entire universe three years ago, *Voyager* offers above-average solid 3D graphics with a strategy/shoot-'em-up mix, with the emphasis firmly on the fire button.

✪ ✪ ✪ **Andy Storer**



• Your final few seconds before being wiped from the face of the cosmos

MICROPROSE SOCCER

MICROPROSE

Spectrum • £9.95cs, £14.95dk
Also on C64, CPC
Out soon on ST, Amiga
Currently under development on PC

With the football season rapidly winding down towards the FA Cup final (where are you Spurs?), what better way to feed your footie addiction than to play soccer on your Spectrum, courtesy of Microprose?

● **VERSION UPDATE**

Playing either Association Football or American Rules Six-a-Side, you have the choice to enter the Microprose International League, World Cup Tournament or Soccer League.

In-game play consists of an overhead view of the action, with your players able to handle some impressive manoeuvres such as banana kicks, overhead kicks and sliding tackles.

What else can one say? It's a game with two halves, it's a reality that could come true, and football is football – if it wasn't, it wouldn't be the game that it is...

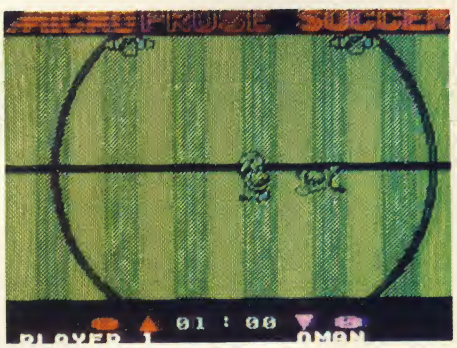
● **GRAPHICS AND SOUND**

The overhead visuals reflect the on-pitch furore perfectly, despite the small monochrome display. The definition and animation of the sprite players is both realistic and at times comical as they steam in with a sliding tackle.

Audio isn't up to much – but then it doesn't have to be – with standard spot FX during play.

● **OTHER VERSIONS**

C64 *Microprose Soccer* received a good reception when it was released last year (reviewed in *Express* 4). The CPC version should be available as you read this, with



• Kicking off with Microprose Soccer

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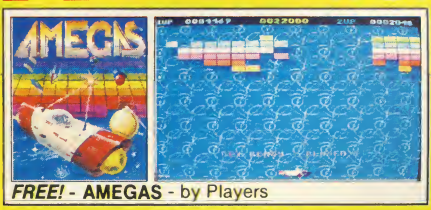

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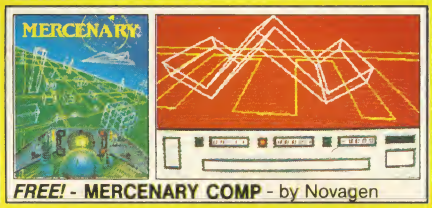

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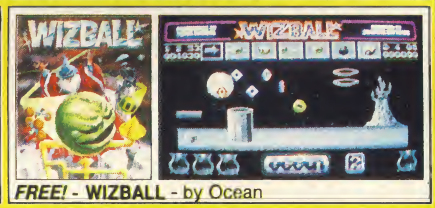

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Do you already own a computer
If so, which one do you own?

ST and Amiga versions nearing completion any day. PC owners will have to wait a little longer, though.

● **EXPRESS VERDICT**

With its fast paced action, varied game options and realistic display, *Microprose Soccer* is just the thing to cure end of season blues. In fact, the only thing wrong with the game is its appalling fake-review advertising campaign in the monthlies – have a look for yourself...

✪ ✪ ✪ ✪

Rik Haynes

MIKE READ'S POP QUIZ

ELITE

C64 • £9.99cs, £11.99dk
Also on Spectrum, CPC, ST, Amiga, PC

It hasn't been on telly for a good few years but, in its infinite wisdom, Elite has dragged the muso's quiz out.

● **GAMEPLAY**

Written in much the same style as Elite's earlier effort *A Question of Sport*, this game attempts to pitch two teams of three against each other. You're three people and, in one player mode, the 64 is the other three.

There's a lot of choosing the people you want to have on your side, most of whom are vaguely familiar faces from the world of pop, which is all well and good but a tad pointless. Since all you've got at your disposal is your own loaf, there's little point in picking a team which supposedly specialises in Rock and Roll or whatever.

The memory stores five question banks. Only the hardy will venture to dip into the fifth since it takes a small eternity to load.

A full game against the computer will take up about twenty minutes at the top. All you have to do is answer a bunch of questions about classical, country, folk, rock and pop music. Radio 1 person Mike Read sits in the middle of all this, pedantically offering bonus questions to the other side via scrolling speech bubble.

All the questions are straight text posers, so no graphic or music teasers have been drafted in à la *Trivial Pursuit*.

● **GRAPHICS AND SOUND**

Our trusty team members are the only effort on the graphics front, and they look a bit iffy. But at least Elite has managed to make Read look like himself.

What sound there is is pointless and annoying. Horrid beeps if you get things wrong and nasty applause if you get things right. Yuk.

● **OTHER VERSIONS**

It's out on most formats. We looked at the PC and Amiga versions which include digitised faces but only in the team members. Other than that they're all much of a muchness.

● **EXPRESS VERDICT**

The whole rigmarole of playing this is too tedious. Even keen pop trivia nuts will soon turn away because it's all too slow and laborious and tiresome.

There's also the utter nonsense of including lots of questions on classical music and folk which, for most 64 owners, means nothing.

This isn't a waste of a good idea – it never was a good idea. *Pop Quiz* was born to be what most games achieve over a long period of development – mediocre.

✪

John McCleary

• Now we know why the TV show was scrapped

ARCHIPELAGOS

LOGOTRON

Amiga £24.95dk
Also on ST
Out soon on PC

5 GAME

How about a computer game which offers strategy, complexity, involvement, originality and lastability? Well *Archipelagos* offers this, and more...

● **GAMEPLAY**

Archipelagos places you in control of a floating spirit in the world of the archipelago, a place originally conceived by the Ancients, but now populated by the Visitors and their mutated creatures of death and destruction. So it's up to you to unroll the welcome map and get rid of these unwanted guests by removing their power – in the form of an Obelisk – from each archipelago. This is achieved by destroying a number of stones scattered around the area before taking out the obelisk. Unfortunately, the stones have to be connected to the Obelisk land mass, but on your travels you can build your own connections, at the expense of more of your energy supply. Luckily, this can be replenished by collecting spore pods which appear randomly throughout the islands.

Other matters stopping completion of your mission are Arboreal trees (which will cast your soul into eternal torment), Necromancer (changing the land into quicksand), Eggs of Blood (poisoning and devouring the land), Lost Souls (a whirlwind which will take you with it), and only having 90 seconds to get to the obelisk after taking out the last stone. Phew! This, coupled with the 10,000 different archipelagos to complete, means *Archipelagos* should keep you going for quite some time!

● **GRAPHICS AND SOUND**

Audio-visual presentation is superbly atmospheric, and the solid 3D landscapes are brilliant – you get a real feeling of being there during play, thanks to the all round visual capability. Movement is smooth enough, and the screen update is immediate as you move around the islands. The characters populating the archipelago have first class definition and colouration. Audio consists of simple sound spot-effects and a weird soundtrack.

● **OTHER VERSIONS**

Much the same on the ST, *Archipelagos* is also due out on the PC shortly – we look forward to comparing it to the excellent ST and Amiga versions.

● **EXPRESS VERDICT**

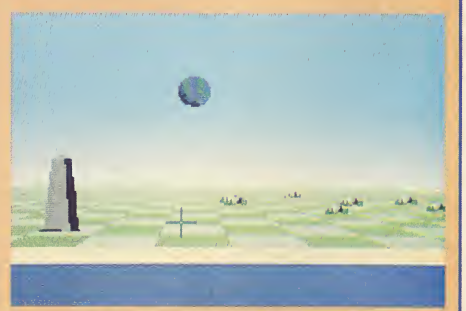
A remarkably refreshing release, *Archipelagos* is one of the best games we've played this year. In fact, its only serious competitor is EA's superlative *Populous*.

Archipelagos is off-mainstreet, surreal and frighteningly addictive. Fans of *Sentinel* will love it, and it may just attract a new section of gameplayers wanting to sample something different from the constant stream of unoriginal trash that comes their way.

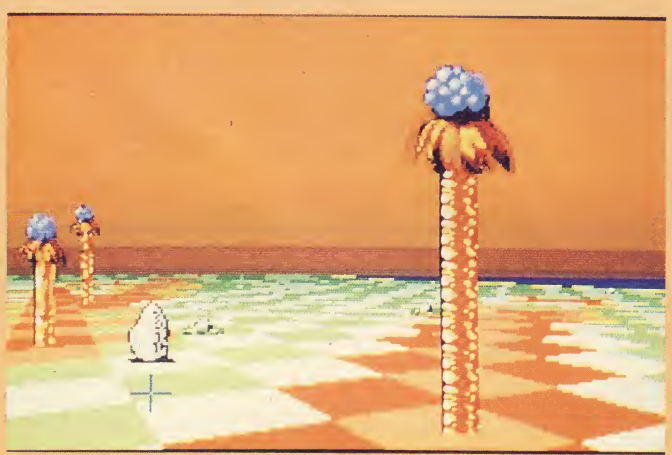
Archipelagos is an instant classic which actually is worth the asking price – for once!

✪ ✪ ✪ ✪ ✪

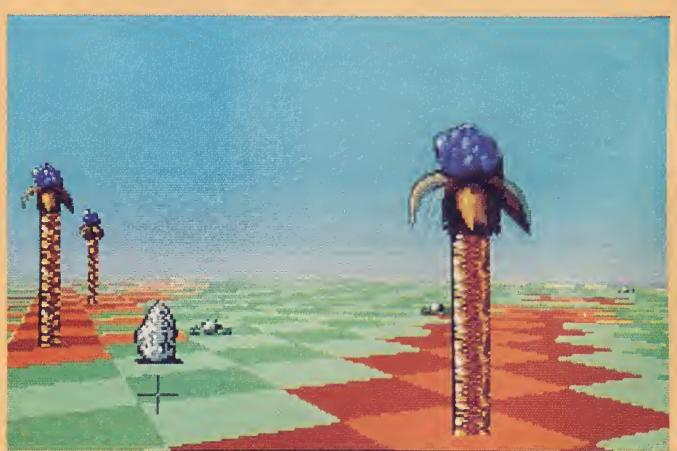
Rik Haynes



• To your left is the obelisk, straight ahead is the satellite and to the right are plenty of spore pods



• Archipelagos by day...



• ...and Archipelagos by night

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Beyond our Ken

Ken Mosley shares his outspoken views with the computer world...

Express wishes to point out that Mr Mosley's views are entirely his own personal opinions and are not necessarily shared by the management (or indeed anyone else)

Political hacking

I was interested to see Tory MP Emma Nicholson's plan to make hacking a criminal offence, punishable by ten years inside. Of course it doesn't go nearly far enough. Ten years is far too good for these parasites on humanity; now I'm not the sort of person that advocates dousing people with petrol and torching them, but I think they should be strung up before someone gets killed. But then it's just the sort of wishy-washy liberal nonsense you'd expect from this bunch of wets.

Of course, as a comms man myself – I run a bulletin board and a user club here in Halifax – it is obvious that sometimes hacking may be quite legitimate. Anyone found wrecking the data files of, say, the National Council for Civil Liberties, or investigating the members list of the CND, or any other bunch of lentil-eating troublemakers, should be let off the hook, or maybe employed by MI5, if they aren't already. After all, they're only protecting the freedom of information. Live and let live, that's what I say. We certainly don't want any woolly-minded compromisers telling us what to do – that's why we should bring back hanging.

Price of success

I see my column coincides with the price increase of *Express*. I can't help thinking that 58p is far too little. Keep prices low and what do you get? A bunch of riff-raff reading the magazine. Now, I've nothing against the unwaged – after all, some people have to be unemployed as a result of new technology, that's progress – but to keep the image of the magazine up it should be at least £1.

Machine talk

I'm thinking of buying a 2286 now, for my bulletin board. Mind you, I don't think much of these new machines they're bringing out. How have machines really changed in the last few years?

I mean, look at my UK101. I've expanded it so that it can now run PC software and when I get my moped fixed I can pick up that Amiga bridge board from my mate in Huddersfield. It'll take a bit of tweaking but it'll be working soon.

Because, after all, some software does get better; there's plenty of splendid and sound software now available for the Amiga, which is why I need the bridge board, for some software I want to get my hands on from my friend Kurt and his underground club in Hanover. Now, I'm no racist, but ask yourself this: why were the first computers all black, yet they are now all white?

Charity begins

Oxfam's scheme where you can bring in your old software to their rag and bone shops for the third world is another example of muddle-headed nonsense. How many people in the Sudan have a Spectrum or C64, I ask you? Instead of encouraging them to sit around by the pyramids and play games they should be digging irrigation canals by the Orinoco and clearing the jungle to make coffee plantations.

Far better to build them all refrigerators to keep their mango juice in and get rid of all this ozone nonsense they keep telling us about. The sooner away with it the better, I say. They need the fridges, we need the hot summers. Glad to see IBM taking the lead here, with its factory in San Jose pumping out millions of gallons of CFC and doing the job of a thousand sweaty aerosol deodorant users.

ACE card

I was disgusted to see that Future Publishing, who used to produce *ACE*, declined my offer of purchase. I submitted a sample of my editorial writing and offered them the entire proceeds of my moped and Reliant Robin. Their rather dismissive and rude letter said they thought my views were "incompatible with the majority of readers" and claimed my offer was "rather less substantial" than they wanted.

Typical! Just because a company publishes six magazines of which five are market leaders and one was voted 'Magazine of the Year' they think they can start ignoring the little man. I've decided that the only way to infiltrate *Express* is from the inside, which is why you'll be reading quite a lot from me in the coming weeks.

Sugar the pill

I'll be interested to see the Amstrad 2286, having read *Express*'s (overly generous, I thought) review last week. Clearly the thing is far too expensive. I'm beginning to wonder if Amstrad are a spent force, taking all their time trying to persuade Joe Punter to buy satellite TV and get as much *EastEnders* and Derek Jameson as you can take instead of peddling their computers.

Alan Sugar has often been described by the press as a bully-boy tactician. And more power to his elbow, I say. It's this sort of thing that has made Britain what it is today. But I wonder if he's going soft, all this apologising to the overpaid besuited lemmings in the City for only making a hundred million.

I've long been a fan of Amstrad; my Amstrad tower MIDI system served me well for over eighteen months, though I never managed to hook it up to the MIDI interface on my mate's ST. When will Atari get it right? Just shows these American corporations can't hold a candle to our great British companies.

Postbag

If you'd like to write in with your views, go ahead. After all, you're welcome to your opinion.

Ken Mosley will be back shortly.

NEXT WEEK

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We reveal where YOUR money goes

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Express interviews Prof. Benoit Mandelbrot

A-Z Part 5

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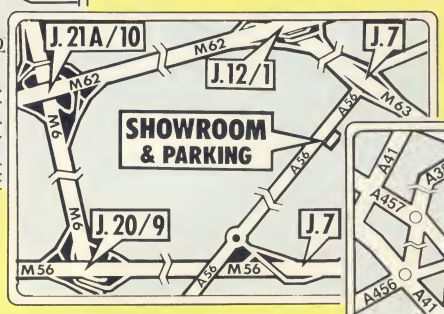

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